amateur radio

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

AMSAT - OSCAR 7

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CARRYING AMATEUR RADIO

Confirming Reception By

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ALIA CANADA U.S.A. W. GERMANY

VOL. 49, No. 2 FEBRUARY 1981

FEATURED IN THIS ISSUE:

- ★ JAMBOREE ON THE AIR
- ★ AN AUTOMATIC CQ CALLER
- ★ WORLD-WIDE COMMUNICATIONS FROM HAND-HELD AND MAN-PACK TRANSCEIVERS
- ★ FIVE-YEAR INDEX OF TECHNICAL ARTICLES

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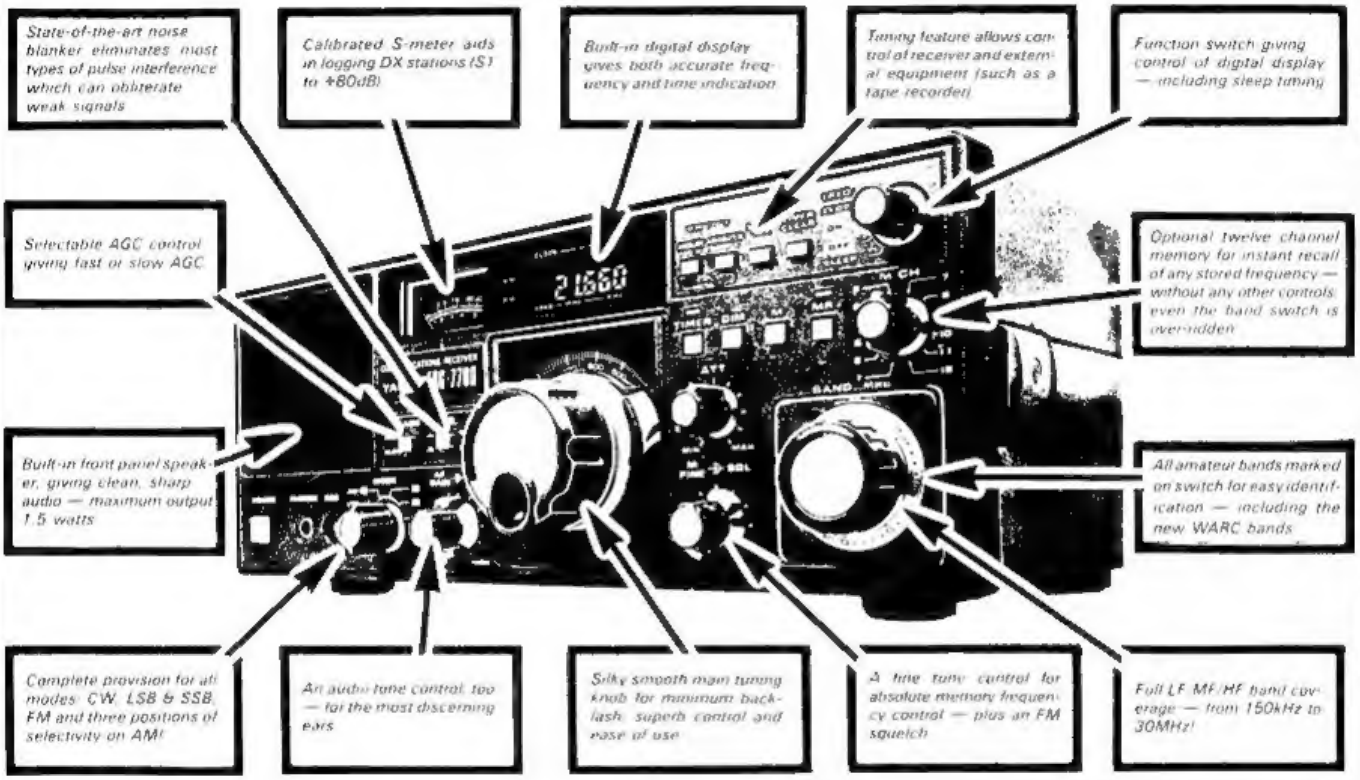

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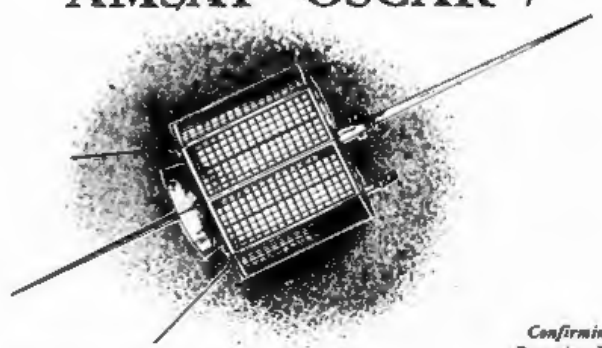
AMSAT-OSCAR 7



ORBITING SATELLITE CARRYING AMATEUR RADIO

AUSTRALIA CANADA U.S.A. W. GERMANY

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AMSAT-OSCAR 7 is a joint project of amateur groups in Australia, Canada, Germany and the United States, co-ordinated by the Radio Amateur Satellite Corporation. Launched in 1974, it has a 1460 km circular orbit. Passes repeat on a two day cycle. It is 36 cm by 42.4 cm and weighs 28.9 kg. Oscar 7 has been a bit wayward lately — see Bob Arnold's notes on page 22.

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QSP QSP QSP

Draft of Australian Table of Frequency Allocations

— How the Proposals affect Amateurs

The Minister for Communications has now released a Draft for public comment of the Australian Table of Frequency Allocations. A revision of the Table has been made necessary by the decisions of WARC 79. Each country, including Australia, will determine its own spectrum requirements within the framework of the ITU International Table. These proposals for a new Australian Table are of vital interest to Amateurs as that Table will finally determine the spectrum available to Amateurs in this country. The final date for comment is the 16th February, 1981 and Amateurs are urged to comment, not only to criticise proposals that are not liked, but also, and equally importantly, to support proposals that are attractive.

In describing the proposals, I shall indicate the present position of the WIA to those proposals.

THE BANDS BELOW 30 MHz

No changes are proposed to the existing bands at 80, 20, 15 and 10 metres. The only comment that the Institute would make in respect of these bands is to suggest that a small segment around 3.8 MHz to enable Australian Amateurs to seek international phone contacts would be desirable and may be practical.

Changes are proposed to the 160 metre band. At present the band 1800-1860 kHz is allocated to the Amateur Service on a secondary basis to Radionavigation. It is proposed that the band 1800-1825 kHz be allocated exclusively to Amateurs in Australia and the band 1825-1875 kHz be allocated to Amateurs as secondary to Radionavigation. The Institute supports the exclusive segment and the overall increase in the band.

The present allocation at 40 metres remains but with an increase from 7150-7300 kHz with the latter segment being on the basis of non-interference and is provided for by a new proposed Australian footnote. The Institute supports this proposal to increase the 40 metre band in line with the band available to Amateurs in New Zealand.

The new bands at 10.1-10.150 MHz, 18.068-18.168 and 24.890-24.990 MHz are provided for in the proposed Table. However, the Draft does not address itself as to when these bands will become available for use by Amateurs. The Institute believes that each of the bands should be available as from the 1st January, 1982. In addition, the Institute believes that the proposed footnotes should be recast to provide firstly, that no further assignments to the Fixed Service should be made in these bands and secondly, that existing assignments should be relocated as quickly as possible, it is suggested, by not later than the 1st July, 1984 in any event.

BANDS BELOW 960 MHz

A significant proposal for the 6 metre band is included in the Draft Table. It is proposed that the band 50-52 MHz be allocated primary to Broadcasting, secondary to Amateur with the band 52-54 MHz remaining exclusive Amateur.

The Institute does not believe that the present allocation to Channel 0 is sensible frequency management. However, the Institute recognises that that question involves a decision that will almost certainly be made independently of the question of the Australian Frequency Table and therefore the solution proposed must be strongly supported. It will, in particular, allow Amateurs to operate outside television hours on the band 50-52 MHz or to operate outside areas served by Channel 0 television transmitters.

No changes are proposed in Australia to the 2 metre and 70 centimetre Amateur bands. The Institute notes that the present footnote relating to the temporary Amateur use of the band at 576 MHz is not included in the Draft. This will be pursued. The greater utilisation of the 70 centimetre band is to be encouraged as a long term investment.

BANDS ABOVE 960 MHz

In conformity with the decisions of the WARC, the band will become 1240-1300 MHz.

Above this band no changes are made affecting the Amateur Service except in three respects. Fixed and Mobile are added to the already shared band at 2300-2450 MHz. The Institute believes that at least in the new Amateur Satellite band from 2400-2450 Fixed and Mobile should be deleted.

The Draft Table includes all the new Amateur bands above 40 GHz allocated by the WARC. The Draft also includes all the new Amateur Satellite bands allocated by the WARC.

Overall the Institute welcomes the Draft Table. It particularly welcomes the proposed expansion of the 160, 40 and 6 metre bands.

It is hoped that Amateurs will generally respond to the invitation to comment on the Draft Table. The Institute believes that it is important that the Amateur position is seen to have general support. Please consult your Federal Councillor for further information.

MICHAEL J. OWEN VK3KI ■

WIANEWS

DRAFT OF AUSTRALIAN TABLE OF FREQUENCY ALLOCATIONS

As already widely publicised, the draft table was released by the Minister for public comment on 22nd December 1980. Comments, generally in favour and/or with any specific suggestions, are required by the Department of Communications by 16th February at the latest. It will be to the future advantage of the amateur service if responses are submitted from as many amateurs as possible — in other words, the "numbers game".

— — — — — PLEASE RESPOND — — — — —

A copy of the draft table has already been sent to each Divisional Federal Councillor. As the printed copy of the draft tables extends to over 160 pages of script it is indeed a major work of its kind and therefore it is expected that copies will not be easily obtained.

PORTABLE WICEN REPEATERS

The DOC is prepared to authorise "portable repeaters" for WICEN use in the 2m and 70 cm bands subject to a number of conditions under current discussions with the WIA which made the initial approaches.

AMATEUR HANDBOOK

A number of amendments to the Handbook, including some quite minor typographical error corrections and some changes since it was printed (e.g. third party concessions), are under discussion with DOC. At this time it seems doubtful if the number of amendments required would warrant a fresh printing of the Handbook.

KAA-KZZ SUFFIXES

Two days before Christmas news was received that some amateurs were being issued call signs in the series VKxKAA-VKxKZZ. This was confirmed on enquiry to Central Office and was in fact for-shadowed in WIANEWS in AR December 1980 under the heading "Joint Committee".

The new suffixes are obtainable on request by amateurs holding both Novice and Limited qualifications. It is understood the licence fee will be $15.00 per annum, the same as for full or limited licences. A new form of licence (RB94D) is to be used and it is assumed the holder will thereupon relinquish both his Novice and Limited calls for which he would be paying $25.00 per annum.

Special pro rata arrangements are to be applied when the holder of either a Novice or a Limited call qualifies for the other and requests a KAA-KZZ call.

The new form of licence is expected to state quite clearly that the holder of a KAA-KZZ call is not entitled to any additional privileges than he enjoyed with a Novice and a Limited call and that the two are not interchangeable.

NEW LEGISLATION

News has been received from the Department of Communications that preliminary work has commenced on the drafting of a Bill for introduction in the Parliament to replace the Wireless Telegraphy Act of 1905 and Institute comments have been sought by DOC.

LONG TERM PLANNING

Both VK1RH and VK4DT have submitted papers on the future of amateur radio in Australia and the long-range planning deemed desirable for its well-being through this decade. This question was raised at the 1980 Federal Convention and both these Councillors were charged with this preliminary work. Arrangements are being made for both these papers to be printed in AR to enable members to send comments to their Division (Federal Councillor) in good time before the 1981 Federal Convention early in May.

MISSING AR's

Last August it became evident from individual complaints that a substantial quantity of July Amateur Radio was not received in the general post code areas 4200 to 4400. Every month, almost without exception, a number of missing AR's have to be replaced somewhere in Australia. The letters of complaint about these were sent to the respective Divisions for their information after replacement copies were mailed out to members either direct at considerable extra expense or sent with the following month's issue of AR at the Category B rates of postage.

When it became clear that there was a "flood" of missing July issues, an investigation was initiated with Australia Post. All the address labels were in order. The mailing service confirmed that all copies of the July issue had been properly bagged and despatched. Nothing unusual could be found at the Melbourne end. The quantity of AR "overs" was normal. Nevertheless about 100 copies of the July issue were replaced. The Queensland Division was told about these matters and kept informed.

Section 5 of the Postal Guide sets out the procedure to be adopted for undelivered postal articles and therefore the mailing service was requested to advise the post office of receipt that an indeterminate number of July AR's in the general post code areas 4200-4400 appeared to have gone astray.

In dealing with the largely mechanical processes of labelling and processing magazines and their inserts for despatch by post, it is impossible to state that the despatch of the journal to any one particular individual is correct. When 100 or more disappear or when inserts are missing from 100 or more copies, something unusual has occurred. The Executive Office goes out of its way to minimise the scope for unusual happenings, taking into account the numbers of the different organisations involved with getting AR to you.

ANARTS AND RAOTC

In a letter from the Secretary of Australian National Amateur Radio Teleprinter Society, the President is notified as VK2ABH, the Secretary is VK2AHB and committee members are VK2AOE and VK2BVJ.

The annual dinner of the Radio Amateurs' Old Timers' Club (RAOTC) of Australia will be held on 5th March. The President, VK3ZS, advises that the guest speaker will be Mr. A. F. Guster or nominee) of the Satellite Policy and Co-ordination Division of DOC, Canberra. ■

Jamboree on the Air

Commissioner Noel Lynch VK4KNL
National Organiser, Jamboree on the Air

Australian amateur operators take a bow! Your contribution to the success of the 23rd Jamboree on the Air, held on 18th/19th October, 1980 was, as ever, magnificent and, on this occasion, it attained an Australian Jamboree on the Air record!

837 Amateur Radio operators in this country (606 in 1979) operated 397 amateur radio stations (280 in 1979) to achieve two new Australian records in this department. Your efforts combined with the tremendous enthusiasm of the Branch Organisers of Jamboree on the Air in each Australian State, to set an all-time record in participations — **20,190** Scouts, Guides and their supporters enjoyed the results of your contribution. Our previous best ever participation was during 1979, when 16,654 Scouts and Guides enjoyed the 22nd Jamboree on the Air.

As one who has been associated with every Jamboree on the Air since its inception 23 years ago, I have been continually amazed not only by the growth of this activity over those years but by the interest it continues to arouse each year. Certainly, not all the operators who commenced participation in JOTA in the first year of its inception, continue to take part, although many of these people still do, but it continues to attract new amateurs to this activity. The contribution of you all, whether old time participants or new amateurs enjoying JOTA for the first time, have ensured its success, for without you all, there never would have been any Jamboree on the Air either in this country or elsewhere in the World. So your contribution to international friendships both in scouting and amateur radio through JOTA could never be measured, but it must be enormous!

In 1982, Scouting celebrates its 75 years of Scouting throughout the world, and its 25th Jamboree on the Air. It is our hope that as many of you as have ever participated in JOTA over those 25 years will join with us again to make the 25th Jamboree on the Air really worthwhile, but most important, give us the opportunity to meet you all again and say thank you for a job well done.

As in previous years, the theme for this year's JOTA was set at the National Opening Ceremony at Government House, Canberra at 0400 GMT on Saturday, 18th October, when the Governor General and Chief Scout, Sir Zelman Cowen, formally declared open the 23rd Jamboree on the Air through VK1BP, the official amateur radio station of the National Headquarters of the Scout Association of Australia. Jim Jennison VK1JN and fellow members of the Royal Naval Amateur Radio Society again provided the technical expertise to get the function off to a good start, and despite adverse propagation conditions, all States reported in within the next hour to advise that Jamboree on the Air was well and truly under way in all the other States. Reports indicate that no fewer than **7368** amateur contacts between Scouts and Guides in all the Australian States and most overseas countries were logged during that weekend.

A new participant this year was a Scout station VK0KC on Mawson Base in the Antarctic where three Scouting leaders joined in the activities and logged many interesting contacts. Naturally, this station was much in demand from Australian Scout and Guide stations as well.

It may be of interest also to record that this year the participation by Australian Scout Groups was confirmed at better than 26 per cent of all Australian Scout Groups. Unfortunately figures for the Guide Companies were not available in this respect.

Queensland Scouts who had previously assisted in recovery of personal effects of the ill-fated crew at the crash of a wartime DC3 Douglas Dakota spent the weekend erecting a memorial on the site at Camp Carnarvon (in Central Queensland) and participating in JOTA.

There were legions of interesting contacts with overseas countries, but Scouts and Guides were disappointed that Scouts in many of these countries were not permitted to speak "on air".

The Novice licensees increase in numbers each year and more and more are joining with other grade licensees to make worthwhile contributions.

A **West Australian** Group received a May-Day call in the middle of their participation and were able to play an important part in alerting the responsible authorities and standing by until the rescue of a boat in distress off the coast was completed.

North Queensland Scouts and Cubs at 23rd JOTA.

Some interesting JOTA activities — In **Victoria,** many participants in JOTA joined in a constructional project to construct a light flasher unit — technically an astable multi-vibrator with two LED displays and approximately 1000 of these units were constructed successfully and proved very popular. Fox hunts (radio variety) were also included and proved very popular. A number of sea scouts spent the two days and one night sailing or rowing between their hall and the "Castlemaine", the World War II Bathurst Class Corvette, where they joined ex-Navy operators in making JOTA an enjoyable and memorable weekend.

A large carpet snake visited one Group of Girl Guides participating with a Western Australian amateur. It was not included in the official list of visitors to the shack reported by the Guides.

Space, unfortunately, does not permit a full account, but obviously Australian Scouts and Guides enjoyed themselves immensely, and their sense of indebtedness to the Amateur Movement is a profound one. I hope our very happy association in the past will continue on for many more years. Meantime the report of the Australian participation in JOTA continues to arouse considerable interest in World

Scouting circles, and in the World Report on JOTA the report of the Australian participation, and the contribution made by Australian amateur operators, continues to occupy a very sizeable portion of that report.

In Scouting we have a quaint but very sincere way of saying thank you to our friends, or those who have helped us in any of our activities. It is a very loud **BRAVO!** to all Australian amateurs who helped us in the 23rd Jamboree on the Air, and made this such a successful year this time, we say an extra special and very loud **BRAVO!!!** ■

JOTA In Victoria

THE GATHERING ON THE MOUNT

The migration began Friday evening as the pilgrims settled in the village of tents on the slopes of hills of Macclesfield. The leaders of this fine body of people were Kevin VK3BOE and Allan VK3VHS, who argued long and loud about the erection of a SCALAR SC33DX 3 element beam and the choice of which three bands to employ it on. Finally the beam was settled at 20 metres in the land of VK3SDU.

By the time the sun set the local generator was alive and the beam was tried on 15 metres, just in time for the VK-Europe net and immediately confirmed the wise choice of site for the weekend and the faith of Scalar in their beam on loan for the JOTA.

By the time the net closed the station had worked some 16 countries and the Venturer Scouts in attendance were suitably delighted. During the night the operators in attendance had a great time on 20 metres, working several JAs, Ws and many Europeans until they fell asleep at 5 in the morning.

At 7 the cook had breakfast on the plate and several long faces surfaced for the day. By 10 a.m. the antenna was in full bloom with a Slim Jim/IC211 going flat chat with LINDSAY VK3BRV in command and KEVIN VK3ASM on a 4 element endfire on 10/15 and a FT101Z giving the first group of Girl Guides a fine chat around the countryside.

Meanwhile the terrible two (Allan and Kevin) were attempting to erect a monster rhombic, something around 585 metres long, which was finally completed around late afternoon.

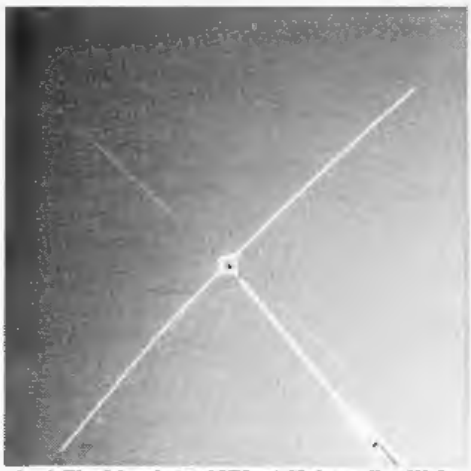
By the 8 o'clock whistle we let the last of the 120 visitors depart and turned our thoughts to the rhombic. Would it WORK? The answer was provided by OH2BBR, who thought 5 and 9 plus 20 was OK. We think it marvellous!

On Sunday BARRY VK3NXX and 120 Scouts and Guides arrived and all had a most enjoyable day, the last group leaving at 5 p.m. By the time the strategic withdrawal was complete the clock had reached 9 p.m. and many tired but happy operators crept home.

On the Mount — Alan VK3VHS and Kevin VK3BOE with Guides Vicki Fisher and Ruth Starkey.

The weekend was an outstanding success because of many factors; firstly, each operator had time for every person in the tent as the visitors were split into three operating sites with 10 to 12 in each tent, thus allowing each person to have a chat with the contacted station. Secondly, the site was one which was in the spirit of Scouting, that is a portable station in a tent on top of a mountain. And lastly the Scouts were involved in the setting up, antenna building, accommodation and paper work of operating an amateur station. ■

And in S.A., Salisbury District with 1st Manor Farm Troop.



And Flashback to 1979 at Kalgoorlie, W.A.: The VK2ABQ beam used for JOTA.

Bill VK6NDZ with Scout Trevor Spence.

An Automatic CQ Caller

H. Denver VK3AHQ
38 Deanswood Rd., Forest Hill 3131

If you are a CW operator and dislike the drudgery of frequent CQ calls then here is a gadget that will do the task for you. This article describes the theory behind the design of the instrument, its programming and operation. Annexes at the end of the article give further details for both beginner and expert. Although the system was devised in 1977 it is still a useful design.

There are many ways by which automatic transmission of CW signals can be achieved, ranging from rotating discs, with notches representing the CW characters, to complex and very expensive solid state keyers. The circuit described here can be built for about $12. It is a particularly valuable instrument for contest operators as 500 QSOs represent some 1000 CQ calls.

The heart of the system is a Programmable Read Only Memory (PROM) integrated circuit. The block diagram is shown in Fig. 1. A PROM is a device that can store a large number of bits of information and is described in more detail in Annex 1. Beginners should read this before reading further.

The message for transmission is stored in the PROM and once placed there cannot be altered so be sure that you are decided on what you need. A Harris 7611 1024 bit PROM was selected because of ease of programming, price and availability. Other types now available may be just as suitable.

The CW speed is variable. It is set by the frequency of an astable multivibrator using a 555 which produces a square output. This is shown in Fig. 2. The output pulses are called clock pulses.

A clock frequency of 25 Hz yields CW at about 18 w.p.m.

These clock pulses drive two binary counters which provide sequential scanning of the PROM address rows. A four-line-to-one-line multiplexer sequentially selects one of four columns and provides a serial output to operate the transmitter keyer. The multiplexer advances one column every time the cascaded 7493 modulo 16 counters reach their maximum count. These counters are advanced on each negative-going clock transition. A third 7493 is used to drive the multiplexer.

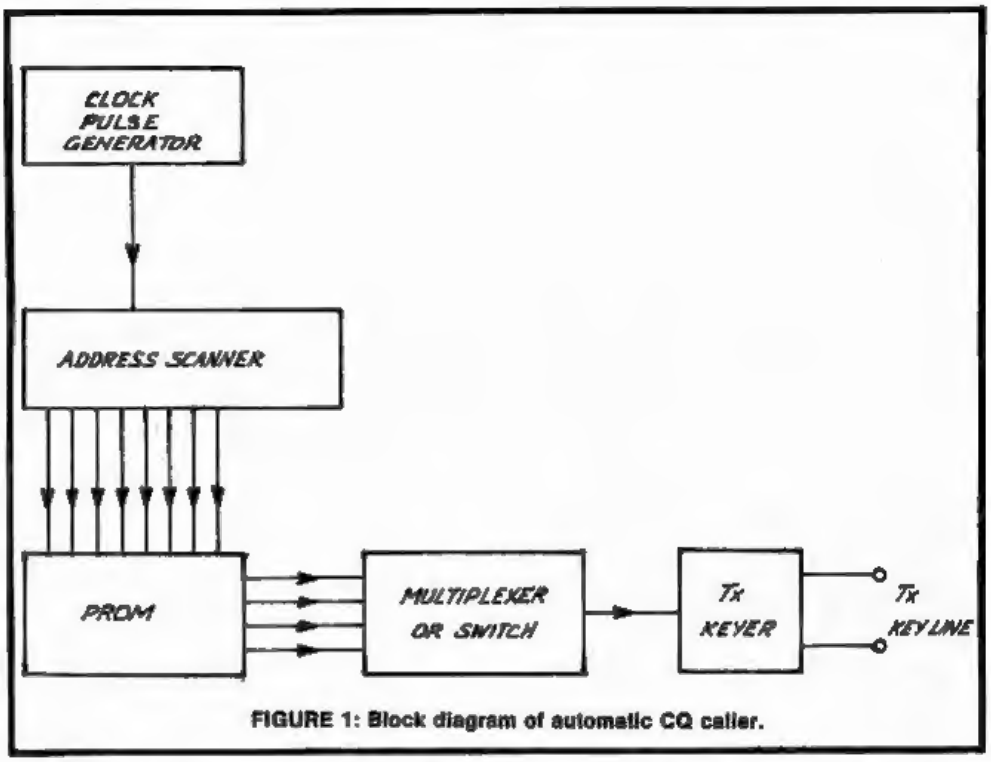


FIGURE 1: Block diagram of automatic CQ caller.

The counters start at 0 and count up. As their outputs are connected to the PROM's address lines it is read in order of ascending addresses. The serial data has the form of a continuous stream of "0" or "1" levels, these being the data stored in the PROM addresses being scanned.

Ten LEDS are used to display the address being interrogated. Although not necessary for normal use they are essential for programming.

The prototype was programmed with "CQ CQ CQ DE VK3AHQ" in column 1 or output one and "CQ TEST TEST DE VK3AHQ K" for output 2. The multiplexer was not used and a rotary switch used instead to select one of the four available columns. That part of the circuit to the left of the dotted line was omitted. (See Fig. 2(b).)

In any case you may prefer manual rather than sequential message selection.

For details of programming refer to annex 2.

A separate sidetone oscillator using a second 555 oscillator may be added. Rv is reduced to 10k ohm but the circuit and components remain the same as for the clock oscillator.

Layout is not critical and the entire unit can be fitted on a four inch square piece of Veroboard.

The author will be pleased to answer any correspondence relating to this unit.

ANNEX 1

THE PROM AS A CW MEMORY

A PROM is an electronic memory device constructed on a single chip of silicon. Its operation is analogous to that of the "pigeon-hole" filing system. These are shelves with vertical dividers to form an array of boxes in rows and columns. These can be numbered so that any box or cell can be located by a knowledge of its row and column number. The combined number becomes the cell's address by which the cell may be found and its contents read. For example the address 120 could refer to the cell in column 1, row 20.

The PROM used in this article has 256 rows and 4 columns. The information that can be stored in each memory cell is rather meagre compared to the pigeon-holes. Instead of a sheaf of papers the PROM stores either a high voltage state or a low voltage state. A high state is equivalent to a voltage between 2.5 and 5V, a low state is equivalent to a voltage between 0 and 0.8V. Once a memory location in a PROM has been filled or written in by the process called programming it cannot be changed. The high and low states are usually represented by a figure 1 and a figure 0 respectively.

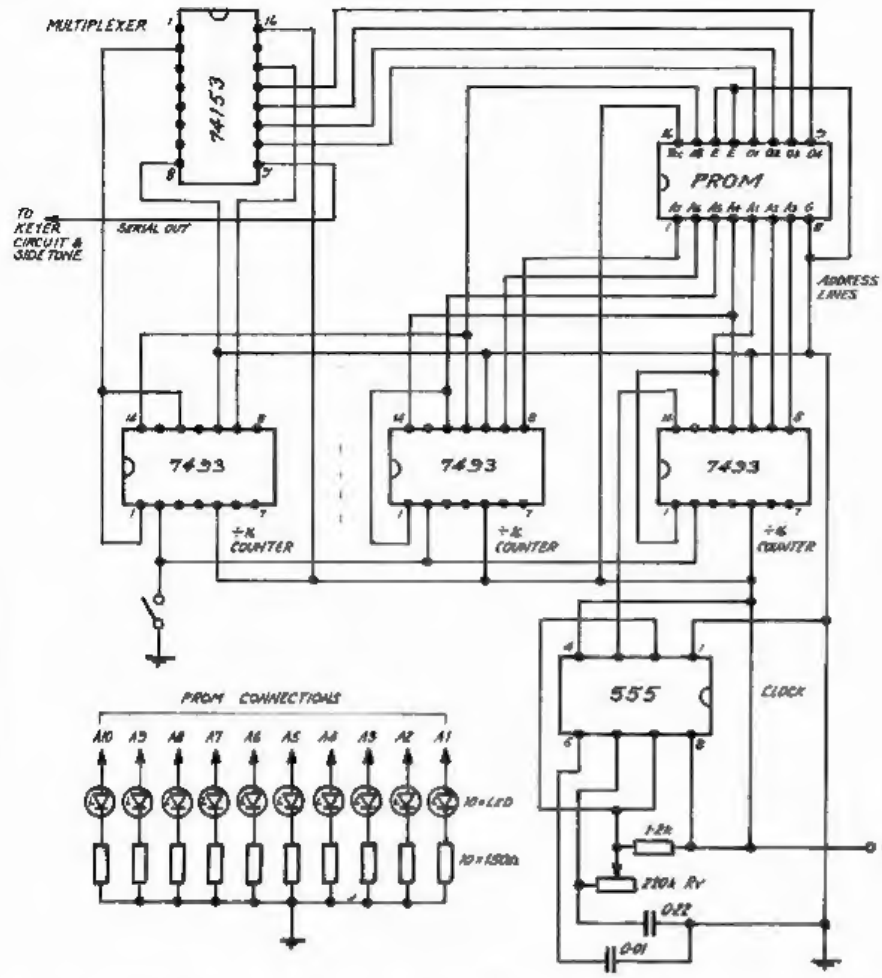


FIG. 2(a): Circuit diagram of automatic CQ caller with automatic sequential election of 4 messages. See text re components to left of dotted line.

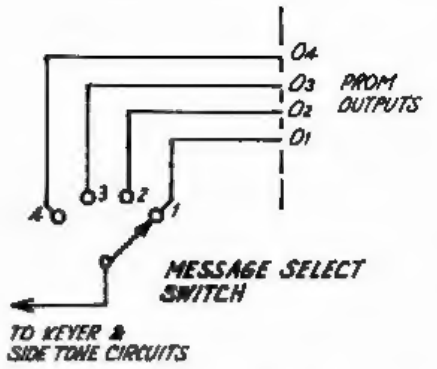


FIG. 2(b): Modified circuit for manual selection of 4 messages.

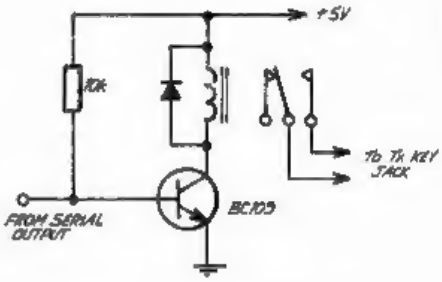


FIG. 3: Suggested keyer circuit.

Once programmed a PROM address location's contents can be read by presenting the address to the PROM in appropriate digital form. The contents of the address appear at the output terminal and the memory can be read again and again without affecting the contents or stored programme.

The matter of translating the 0 or 1 output from the PROM is simple. The 1 output can be used to key the transmitter on and the 0 to open the key. A dot can thus be represented by a 1 and three sequential 1's make a dash. Spaces are made up of 0's. If the memory locations are scanned at a fixed rate then perfect CW is produced, assuming perfect programming of the PROM.

For the PROM used, programming is achieved by burning out tiny fuseable links inside the PROM to provide 0's at selected locations. Refer to annex 2.

The PROM has input connections to accept memory address information. All the necessary decoding and other operations such as signal buffering are built into the integrated circuit. There are four output lines, one for each row.

The preceding descriptions of memory location and reading were simplified to allow the essence of operation to be grasped. In practice for this PROM the stored data is present on the four terminals representing the four rows and only eight input lines are used to select the 256 columns. A binary number code is used to select the columns. The first column requires all 8 lines to have 0 applied. This is represented by the binary number 00000000. The second column requires a 1 represented by 00000001. That is a 1 in the least significant line and 0's on the others. The first five columns are selected by the following binary numbers or codes applied to the 8 lines.

Column	Code
1	00000000
2	00000001
3	00000010
4	00000011
5	00000100

If we were to rename the first column the "zero" column and the next the "one" column, etc., then the column number becomes the decimal equivalent of the binary code required to address it. This can be seen as a simple procedure using binary notation for decimal numbers from 0 to 255. Thus a pulse generator feeding a binary counter with a capacity of 255 counts could be used to produce the signals to automatically and sequentially scan all columns. It should be noted that the data for each of the 4 rows is simultaneously present at four outputs and a switch or similar device is required to select the appropriate message or part of a message in the desired sequence. A 4 line to 1 line decoder or 4 line multiplexer is a suitable IC to scan all 4 rows.

ANNEX 2

PROGRAMMING THE PROM

The programme

The programme to be used must be decided upon and a plan made of where the 1's and 0's are to be stored. This plan when drawn on paper is called a Truth Table. It shows both memory locations and data. The memory locations will later be selected and a link blown out if a 0 is required there. As the PROM is initially filled with 1's nothing is done unless a 0 is required. A long roll of paper or 10 sheets of A4 paper glued end to end is obtained; it is marked out so as to have 256 lines and 11 columns as shown in Fig. 4. The first column shows the memory address in decimal notation. Number these from 0 to 255, the next 8 columns repeat

this number in binary form. If you are not very familiar with the binary system proceed as follows. The first column has 128 0's followed by 128 1's. The second column has 64 0's followed by 64 1's followed by 64 0's followed by 64 1's. The third column has the same pattern but it repeats after 32. The fourth column has a 16 pattern and the fifth an 8 pattern and the sixth a 4 pattern and the seventh a 2 pattern, while the eighth alternates starting at 0, as do all these columns

The paper can now be turned sideways and the CW message marked in column 10. A blank indicates a space or key up and an X a dot and XXX a dash The spaces represent 0's to be burnt in later. A dot is one space duration so leave 1 space between elements of a CW character, 3 spaces between characters and 7 spaces between the words. For clarity the message can be spelt out in the last column. When this step is finished the next step is to programme the PROM.

Programming

Mistakes cannot be corrected after programming. A new PROM will be required so check your programme and proceed carefully. The manufacturers of most PROMs. specify an elaborate procedure and the author cannot guarantee that his simple method will work with other ICs.

Dec. Add.	Binary Address								Program	Message
0	0	0	0	0	0	0	0	0		
1	0	0	0	0	0	0	0	1		
2	0	0	0	0	0	0	1	0	X	
3	0	0	0	0	0	0	1	1	X	
4	0	0	0	0	0	1	0	0	X	
5	0	0	0	0	0	1	0	1		
6	0	0	0	0	0	1	1	0	X	C
7	0	0	0	0	0	1	1	1		
8	0	0	0	0	1	0	0	0	X	
9	0	0	0	0	1	0	0	1	X	
10	0	0	0	0	1	0	1	0	X	
11	0	0	0	0	1	0	1	1		
12	0	0	0	0	1	1	0	0	X	
13	0	0	0	0	1	1	0	1		
14	0	0	0	0	1	1	1	0		
15	0	0	0	0	1	1	1	1		
16	0	0	0	1	0	0	0	0	X	
17	0	0	0	1	0	0	0	1	X	
18	0	0	0	1	0	0	1	0	X	
19	0	0	0	1	0	0	1	1		
20	0	0	0	1	0	1	0	0	X	
21	0	0	0	1	0	1	0	1	X	Q
22	0	0	0	1	0	1	1	0	X	
23	0	0	0	1	0	1	1	0		
253	1	1	1	1	1	1	0	1		
254	1	1	1	1	1	1	1	0		
255	1	1	1	1	1	1	1	1		

FIG. 4: Programme Truth Table. Memory locations without X in have links burnt out.

The circuit diagram in Fig. 2 shows the PROM in the read configuration. For programming it must be in the write configuration. Disconnect the PROM's Vcc terminal from the +5V rail and attach a lead. It will need connection to +11V for programming. Disconnect the two E terminals from 0V and connect them to +5V. Select the output line to be programmed as an 11V pulse must be applied to these as well.

The counter must now be stepped to the first address where a 0 is required. The LEDs will display the binary address, as shown in the Truth Table. A low leakage 10 uF capacitor across the 0.22 uF timing capacitor will slow the clock, it will advance about 1 address per second. A switch in the 5V line will be required to disable the clock during the next phase. Check that the right address has been located as indicated by the LEDs.

Switch the PROM's Vcc lead to +11V and flick on +11V to the selected output and switch off the 11V to Vcc as quickly as possible. The selected location now has a 0 indelibly programmed into it. Advance the count to the next location where a 0 is needed and continue the burning in. Once completed restore the circuit to the read state and it will be ready to go. ■

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	b) 58·88 MHz	Space 12.5 kHz
	c) 108-180 MHz	Space 5 kHz
	d) 380-514 MHz	Space 12 5 kHz
Sensitivity	FM a) 26-180 MHz	0 4uV S/N 12 dB
	b) 380-514 MHz	1 0uV S/N 12 dB
	AM a) 26 180 MHZ	1 0uV S/N 12 dB
	b) 380-514 MHz	2 0uV S/N 12 dB
Selectivity:	FM..	More than 60 dB at —25 kHz
	AM .	More than 60 dB at —25 kHz
Audio Output	2 Watts	
Ant Impedance	50-75 ohms Whip or External Antenna with LO. DX Control (20 dB ATT)	
Freq Stability	26-180 MHz	Within 300 Hz
	380-514 MHz	Within 1 KHz
Dimensions	210 (W) x 75 (H) x 235 (D) mm 8-1/4 (W) x 3-1/4 (H) x 9-1/8 (D) in	
Weight	2.8 Kgs.	
Clock Error:	Within 10 sec. /month	
Memory Channel	16 Channels	
Scan Rate	Fast	8 Channels/sec
	Slow	4 Channels/sec.
Seek Rate	Fast	10 Channels/sec
	Slow	5 Channels/sec.
Scan Delay Time	0 or 4 sec	

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PART THREE

POWER SOURCES FOR HAND-HELD/ BACK PACK GEAR

Having described the way in which the Palomar PTR130K or the Yaesu FT7 or 7B can be used as a "hand-held" system providing world-wide coverage, the newcomer can easily adapt an inexpensive modified CB transceiver in much the same way for good effect on 10 metres.

Continuing this series we will look at two power sources so that experimenters can take to the streets and outside countryside with whichever unit has been adapted.

(1) GEL-TYPE RECHARGEABLE BATTERIES

By connecting two 4.5 or 5 amphour 12 volt gel type batteries in parallel a capacity of 9 or 10 amphours is obtainable. This would power a medium or high frequency hand-held/back pack unit for the duration of an active on a r two-day holiday

Cement the two gel type batteries together with Araldite and place them into a small over-the-shoulder carry-case (available from disposal stores). For hand-held or over-the-shoulder units the battery pack can be slung over the shoulder. For back pack use the small battery pack can be strung across the H-pack frame and a strap (available from disposal stores) can secure the pack to the transceiver to prevent movement while in motion.

Gel type batteries, unlike acid types, can be used in any position and no spillage will occur. Their cost is $38 each and mine have recharged and performed over the last year without mishap. They are lightweight and compact. Available from David Reid Electronics, York Street, Sydney

The circuit in Fig 1 protects your investment and continued operation.

DIODES ALL IN5408 OR SIMILAR

Three levels of protection —

1. Excess current blows the fuse in the battery line
2. Diodes in parallel isolate one battery from the other In case one should malfunction, they prevent one battery discharging into the other
3. Two diodes in series to each battery isolate it from the other during the charging process. They also prevent the batteries from discharging via the charger.

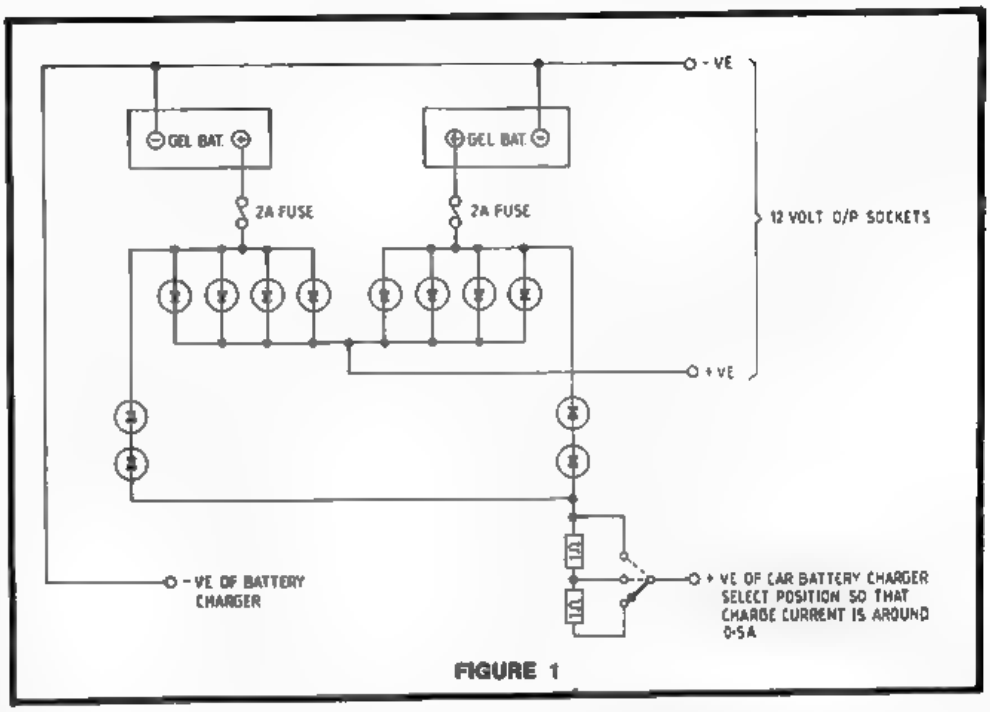


FIGURE 1

Battery charge rate is 250 mA so for two gel types in parallel we require a charging current of 500 mA.

After 20 hours the batteries should be fully recharged.

OPERATION

HF operation time could be greatly increased except that on the HF units used key down with no output draws around 1 ampere or more. The result is eventually that the battery will supply the HF 250 mA receive current OK but will cause frequency shift on transmit. Now will be the time when you get the 2 metre hand-held and announce you are listening on 28.5 MHz or 1.825 MHz for crossband contacts with your hand-held MF, HF, VHF combination.

(2) THE HONDA ED300 PORTABLE 12V DC PETROL GENERATOR

For field base camp operation as well as battery charging which may be required when weeks of outdoor field operation is being considered the Honda ED300 generator has been found easy to carry, has low audio noise output reliable starting and performance and is physically compact.

Two 12 volt models are available. The one including 240 volts only provides 11 amps at its 12 volt output.

The one I chose provided 6 volts at 11 amps (66 watts), 12 volts at 17.5 amps (230 watts) and 24 volts at 11 amps (300 watts).

Length x width x height: 355 mm (14 in.) x 250 mm (9 in.) x 325 mm (12 in).

Weight. 18 kg (39 lb.).

Engine type: 4 cycle, side valve, one cylinder, forced air cooled.

CDI Ignition

Oil capacity: 0.3 litres.

Fuel tank capacity (standard): 2 litres.

Spark plug. BPMR-6A (NGK)

Cost of the unit was around $460 from Highway Motorcycles, 817 Pacific Highway, Gordon, NSW 2072.

The following regulator was used to power the Palomar PTR130K to its full 100 watt power level during a week long holiday on top of Mount Coot-tha overlooking Brisbane

12V 15A REGULATOR

To minimize no huge drop and achieve separation between the generator and the station use 12 lengths (6 for the negative lead and 6 for the positive lead) of 24

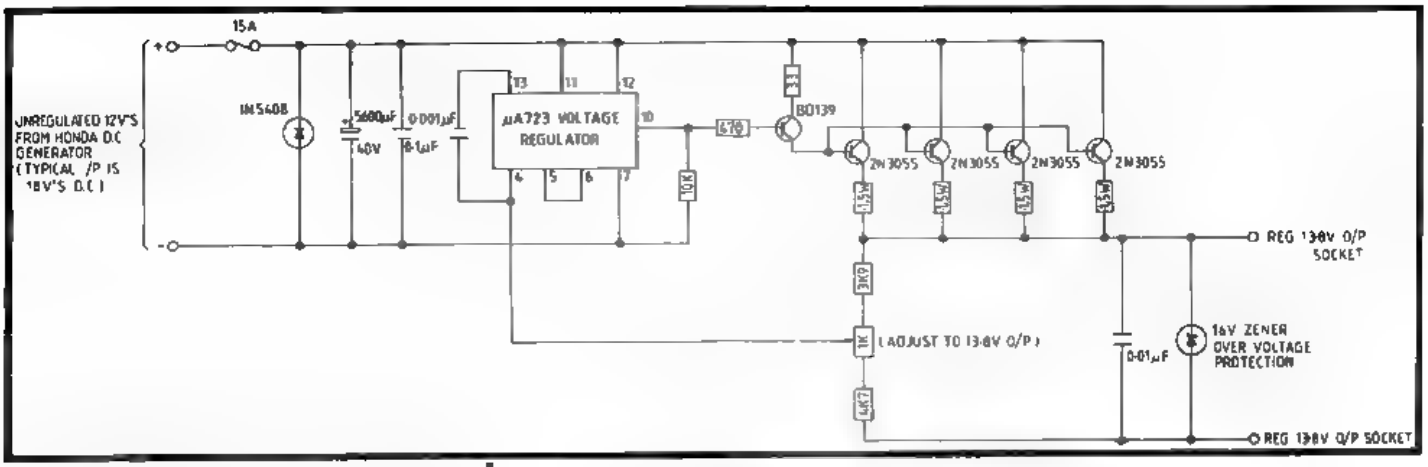


FIGURE 2

strand plastic covered wire 26 feet long, separating the generator from the regulator.

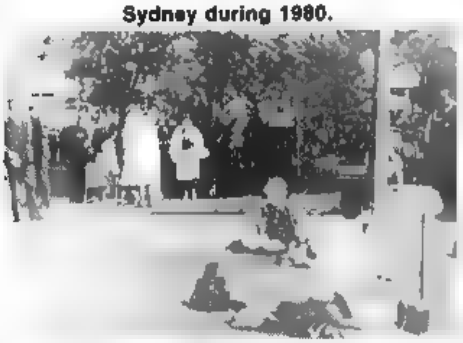
Construction can be centred on a die-cast box 190 mm wide, 55 mm high and 110 deep, with suitable heatsinks for mounting the four power transistors on to the box.

Adjust the 1K preset pot for 13.8V output.

OPERATION

After the regulator and generator were subjected to sand, rain and salt water, covers were removed (the generator comes complete with a tool kit mounted on the unit), all sections washed and cleaned dry, including rectifiers and spark plug. Soon the system was back in action producing the moving electrons our gear required. ■

Author Sam Voron adds some photographic evidence of his Amateur and Citizens Radio Club's public relations in Sydney during 1980.



ANZAC Day march, Sydney. 2m set and HF Palomar PTR 130K operating during the Club's radio patrol.

Display at Lindfield, N.S.W., with the ½ wave 10 metre ground plane as centrepiece.

Display at Chatswood, N.S.W., Council Chambers during a local Festival week.

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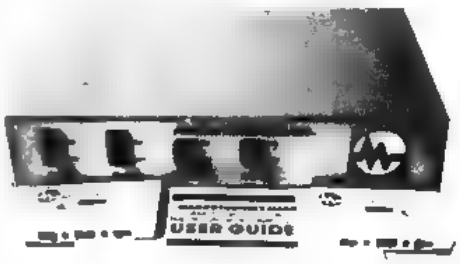

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General: *Frequency Coverage - Receive 0 1-30MHz Transmit 1 8 2 0 3 5-4 1 6 9-7 5 9 9-10 5. 13 9-14 5 17 9-18 5 20 9-21 5. 24 5 25 1 28 0-30 0MHz Power requirement - 13 8VDC ± 15 % Dimensions - 111(h) x 241(w) x 311(d) mm*

Transmitter: *Modes CW(A1)/ RTTY (F1)/SSB/USB/LSB/AM Output Power - SSB10w 100w PEP continuous operation. AM 40 w CW,RTTY 10w 100w*

Receiver: *System - Quad conversion superhet with continuous bandwidth control Sensitivity - less than 0 25 microvolts for 10 dB S + N/N Audio output - more than 2w*

Options: *Power supply (IC-PS15), External Speaker (IC-SP3) CW Filter (FL 32), AM Filter (FL 34), Desk Mic (IC-SM5), L.D.A U it (IC EX182)*

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☆

TECHNICAL AWARD

Mr. Ian Glanville VK3AQU, for his article entitled "The DJ4LB ATV Transmitter as the Basis for a 70 cm SSB Transverter", in April AR. Worth $50.

☆

ASJA
(Al Shawamith Journalistic Award)

Mr. Eddie Rooms VK4AER, for his articles entitled "Amateur Radio for the Cruising Yachtsman", in July and August issues of AR. Engraved plaque plus $15. ■

Amateurs in the News

From Yorke Peninsula Times

TV INTERFERENCE TRACKED DOWN

KADINA — For several months many Channel 10 viewers have been annoyed by reception problems, caused by a faulty antenna in the town

Last week the source of the trouble was tracked down and rectified by a technician from O'Connel's Electronic Services, Jim Baker.

Jim, who is an amateur radio operator, has been suspected by neighbours of causing the nuisance and says he is tired of people knocking on his door at all hours of the night to complain

O'Connel's had also had numerous complaints from people who thought the fault was in their own television sets.

The store allowed Jim time to track down the offending antenna. This he did by attenuating antennae input to a portable TV set in his van, and driving round Kadina streets and lanes in a diminishing circle to find where the interference was strongest.

After approximately two hours Jim located the trouble at a home in Ewing Street, where the TV antenna wasn't connected correctly to the booster. It took him only a matter of minutes to adjust the antenna, free, as a service by O'Connell's to the community ■

FIRST FOR AUSTRALIA

Mid-north amateur television enthusiasts have recently installed the first wind powered amateur television repeater in Australia.

The repeater, the result of 11 months of designing and construction, under the supervision of project co-ordinator, Jim Baker of Kadina, is situated in the Hummocks in grazing country without roads, power or running water. With the aid of air navigation charts and the assistance of Snowtown farmer, Sid Carter, a suitable site was located 1250 feet above sea level, approximately four kilometres south of Illawarra Hill and eight kilometres west of Snowtown. Property owners, Bill and Judy Whiting, have signed a 10 year lease allowing use of the site in exchange for a receiver converter so that they could view the television.

With mains power unavailable, the problem of a power supply was overcome by the use of a freelite generator, donated by Mr Fred Paulson. It has been installed in such a way that the blades clear the ground by two feet. In order to prevent accidents occurring to bushwalkers or stray animals, it has been surrounded by a barbwire fence.

Assisting in the project were Kadina amateurs Ian Bull and Ian Philbey; short wave listeners Larry Youngberry, Kadina, and Sid Carter, Snowtown; as well as other amateurs from Port Pirie, Clare, Cowell and Whyalla.

The repeater housing was originally a four foot square water tank, donated by Bill and Judy Whiting. It had to be fitted with a locking access hatch, an additional galvanised roof and a three inch thick concrete floor The housing was insulated and fitted with a six inch flue, capped by a six inch wind driven exhaust fan.

A regular viewer of the group's broadmast is Mr. Ian Kirk, of Merriton, who receives a transmission on his standard UHF television set. ■

WIA

FEDERAL EMC CO-ORDINATION

- **Tony Tregale VK3QQ,** is the Co-ordinator
- Do you have any interference problems? (power-line, TVI, AFI, etc.)
- If so, send details to:

VK3QQ — QTHR

or via

WIA Executive Office, Box 150, Toorak 3142

FORWARD BIAS

VK2 MINI BULLETIN

COUNCIL REPORT

In February last year, a NSW member applied, at a cost of $3, to Campbelltown City Council (CCC) for permission to erect a commercial 17m guyed steel tower for amateur use. The member, Mal Martyn VK2VWG, was advised that it was necessary "to obtain development consent from Council's Town Planning Department". Mr Martyn then submitted a Development Application, at a further cost of $20. In April, CCC replied that the application had been refused on the grounds that the tower would be "out of character" with the residential area, an "intrusion on the streetscape" contrary to public interest in that it would create a precedent . . . for high elevation two-way radio masts within a residential area" and "a nuisance to the surrounding neighbourhood by way of transmission".

In June, Mr. Martyn wrote at length to CCC and asked that his application be reconsidered. CCC resolved at its July meeting "to adhere to its previous decision". Mr. Martyn then wrote to the NSW Divisional Council asking for assistance. In July, Divisional Council wrote to CCC querying the requirement for Town Planning approval as the hobby of amateur radio is recognised in law as a domestic pursuit. Divisional Council quoted two Victorian Appeals Tribunal decisions of 1975 and 1978. CCC replied in August that they would reconsider the application after Council's solicitor had given legal opinion. In September, CCC resolved to defer the application in order to (1) advertise it, (2) to write to neighbours, and (3) to allow time for the applicant to demonstrate that the tower would not "adversely affect radio and television reception in the neighbourhood". Divisional Council wrote again in September, pointing out that the operations of licensed amateurs are subject to international and federal laws, quoting relevant sections from the "Amateur Operator's Handbook".

In November, CCC informed Divisional Council that they had received nine written submissions objecting to and one in favour of the proposed tower, and a petition containing 68 signatures also objecting to the development. CCC resolved that development consent was required, and again rejected the application on the same grounds quoted in the April letter. Mr. Martyn informed Divisional Council that he would appeal to the Land and Environment Court. This court has only been in existence since 1st September, 1980, and prior to that date, appeals would have been made to the Local Government Appeals Tribunal.

The Land and Environment Court is different from the Appeals Tribunal in that it handles more matters (eg those of the former Land and Valuation Court and some District and Supreme Court matters, as well as Local Government Appeals), witnesses must be sworn in and a judge presides. (Appeals Tribunals were presided over by a Chairman and Town Planners.)

At its November meeting, Divisional Council decided to launch an appeal fund to assist Mr. Martyn. Council regards the appeal as a "test case", there being no precedent, to Council's knowledge, in NSW in either the Land and Environment Court nor the former Local Government Appeals Tribunal. Council donated $100 to the appeal, and to date (6/1/81) donations have been received from G. Campbell $20, C. Sloane $15 and Liverpool ADARC $25. The results of this appeal whichever way it goes, may affect a future amateur tower applications in NSW. Any member who would like to support Mr. Martyn financially is invited to send donations to the NSW Division with cheques written out to the W.A.

Council has approved applications for three VHF and two UHF repeaters: Coffs Harbour 6650, South West 7100, Shoalhaven 7200, St. George 8175 and Gladesville 8475 (test system). These approvals were given subject to provisos of the Repeater Sub-committee.

Council has declared over $500 worth of AOCP course materials missing presumed stolen. The three boxes of missing books were stored in the basement at Atchison Street last May. If any member knows of anyone selling or using NSW WIA OACP books which have not been purchased from either the personal lecture classes or the correspondence course, please notify either North Sydney Police Station or the Divisional President. Subsequent to the theft, the lock to the basement area has been changed.

Council appointed **W. Watkins VK2DEW** as Alternate Federal Councillor for 1981, and confirmed the appointment of **T. Mills VK2ZTM** as Federal Councillor for the NSW Division.

Any group or club which would like postcode printouts of amateurs living in specific areas for a genuine reason is invited to send a request to the Divisional Secretary enclosing a $5 processing fee.

Council has resolved to name the classroom at 14 Atchison Street, Crows Nest, the **"Cec Bardwell Classroom"** in recognition of the 20 continuous years of lecturing provided by Cec for the Institute.

Divisional Council will give recognition to the highest NSW club scorers in the 6 and 24 hour sections of the John Moyle Memorial Field Day. A trophy, enscribed with the names of the winning clubs, will be on permanent display at the Wireless Institute Centre.

Council decided that the Fouth Conference of Clubs will be held on Sunday, 24th May, at Goulburn. Goulburn Amateur Radio Club will be hosting the Conference.

The Division Auction held last November realised $237.

DURAL REPORT

From Acting OIC **Jeff Pages VK2BYY.**

Work is continuing on the audio/control system. The wiring between the transmitter hall and the engineering is complete and in use. The engineering console should be operational by the end of February. A new tape deck has been bought for use in the broadcasts and for social events. The new duplexer for the 70 cm repeater is now in use. Thanks to **Ross VK2ZRU** for donating the duplexer. The repeater, on a frequency of 438.525 out, has a time-out period of 3½ minutes and feeds 10W into a 6 dB colinear at 33m. The repeater now operates from the 2m repeater's batteries and thus will continue to operate in the event of a mains failure.

The 10m beacon is now operational in the low end of 10m and feeds 25W into a ringo at 20m. The beacon idents with VK2WI sent using FSK. By the time you read this, the permanent frequency for the beacon may have been allocated. 6 and 2m SSB solid state transceivers for the broadcast are being built. Work is expected to commence shortly on a 160m AM transmitter. A spare AM transmitter donated to the Institute in December last may be used for this service.

Full time broadcasts from Dural should be possible once the new studio is completed some time in March. The response to the request for operators has been good. If you'd like to volunteer as either an engineer or announcer, please notify the Divisional Secretary either by phone or letter.

Details of three clubs affiliated with the NSW Division.

COFFS HARBOUR AND DISTRICT AMATEUR RADIO CLUB

Box 655, Coffs Harbour 2450.

Nets: Mondays 8 p.m. on 3610 kHz using VK2BMK.

Meetings and classes: 7 p.m. Wednesdays at Orara High School.

President. **M. Francis VK2BMK;** Vice-President: **B. Telfer VK2DDU;** Secretary. **D. Harding VK2YWI;** Other Committee **M. Nally K2VZJ, E. Collins VK2VRC, B. Starke VK2ZCQ, H. Schumacher VK2DGV.**

Repeater: VHF proposed frequency of 6650, test site at Bellingen.

WESTLAKES AMATEUR RADIO CLUB

Box 1, Teralba 2284

Nets: Thursdays 8.30 p.m. on 3565 and 28475 kHz using VK2ATZ, Sundays following relay of Divisional Broadcast on 1812.5 kHz AM, using VK2DCW.

Meetings: Directors' meetings usually last Saturday at 4 p.m., at club rooms, York Street, Teralba.

Classes: Tuesdays 6.45 p.m. NAOCP, 8.45 p.m. CW. Wednesdays 7 p.m. AOCP or other, 8 p.m. Prac. Saturdays 2 p.m. NAOCP. All at club rooms.

Chairman of Directors. **K. Howard VK2AKX;** Secretary: **E. Brockbank VK2ZOP/VLX;** Other Directors. **J. McLachlan, M. Hall VK2DCW, D. Pearson VK2NLM, G. Taylor.**

Repeaters: VHF VK2RTZ channel 7100 approx. 5W, in Wattigan Ranges, about 50 km SW of Newcastle. UHF under construction. Proposed site New Lambton.

Newsletter: WARC Newsletter published monthly.

* * *

HORNSBY AND DISTRICT AMATEUR RADIO CLUB

Box 362, Hornsby 2077.

Meetings: 1st and 3rd Wednesdays, 8 p.m., at Normanhurst West Progress Association Hall, cnr Sefton Road and Lockerbie Street, Normanhurst.

President. **D. Ramsay VK2YLX/NOB;** Vice-President **N. Eichhorn VK2AOH;** Secretary: **D. Scott VK2YME;** Other Committee: **G. McCulloch VK2BMZ, C. Williams VK2YMW, D. Campbell VK2DAC.**

Repeater VHF VK2RNS channel 72750, approx. 20W, at Hornsby, 25 km NSW of Sydney.

Morse Beacon VK2RCW channel 7400. 24 hour operation, sending various speed morse generated by a 2650 microprocessor. Located at Normanhurst, 25 km NW of Sydney.

FIELD DAYS

Central Coast Amateur Radio Club extends an invitation to all interested in amateur radio to attend the club's 24th Annual Field Day on Sunday, 22nd February, at the Showground, Showground Road, Gosford. Events include HF and VHF scrambles (8 a.m. to 8.30 a.m.), 2 mobile foxhunts on 28.45 and 146 MHz, children's events, junior and open pedestrian foxhunts (144.4-144.7 MHz AM), 2 quizzes, disposals from 10 a.m., raffles, ladies' stall and many excellent trade displays. Free tea and coffee will be available all days to those who register. There will also be outings to the Reptile Park and a bus tour. Lunch may be bought at the food bar. Prize presentations will be at 4.15 p.m.

Liverpool and Districts Amateur Radio Club are pleased to announce their 2nd Annual Field Day, to be held on Sunday, 22nd March, at Catherine Fields Community Hall, Catherine Fields Road, Catherine Fields. Turn right off the old Hume Highway, 16 km W of Liverpool. Map reference UBD 106 E3, Gregory's 143 D6. The first two events will be an all-band HF scramble from 8.45 to 9 a.m. and a DF mobile foxhunt on 28.3 and 146 MHz from 9.30 to 10 a.m. Other events include 2 junior, 2 senior and 1 open pedestrian foxhunts on 144.47 AM, a 2 Tx mobile DX foxhunt on 28.3 and 146 MHz, a 10, 2 and 70 cm talk in foxhunt (439 MHz), an observation trial, children's audible beeper hunts, colouring and crossword competitions, 2 quizzes (technical and general), a VHF scramble (repeaters allowed) and a "Meet the People Contest". Disposals will operate all days, as well as trade displays. Free coffe and tea all day. Lunch, drinks, lollies, etc., can be purchased at the site. Barbecue facilities also available. The prize giving and drawing of raffles will be at 4.20 p.m. All are welcome to enjoy a pleasant family day in country surroundings. Contact the Secretary at 105 Wren Drive, Cartwright 2168, or phone (02) 607 0730 for further details.

COMING EVENTS

22nd February (Sunday) Gosford FD.
26th February (Thursday) Close of agenda for AGM.
7th March (Saturday 10 a.m.) Close of nominations for 1981 Council NSW WIA.
22nd March (Sunday) Liverpool FD.
28th March (Saturday 10 a.m.) AGM of NSW Division.
24th May (Sunday) Fourth Conference of Clubs at Goulburn.

News for inclusion in the VK2 Mini Bulletin must reach Box 123, St. Leonards 2065, by the 1st of the month prior to publication. ■

QRK5

A monthly transmission from the Victorian Division WIA.

Written and co-ordinated by VK3WW, QTHR.

A TRANSMISSION FROM VICTORIA

WILLY WILLY'S WORDS

This column originally started as the Divisional news section from VK3 when your scribe was appointed by the VK3 Council. Since then I have repeatedly appealed in this column for news to be sent to me for inclusion. News cannot be fabricated from thin air and unfortunately I have not received the support I expected from members, including the majority of the Councillors. Also on several occasions VK3 news has been published in AR under the separate heading of Divisional Notes. See page 51 of the December issue for the latest example.

This will be my last column as I am resigning from the position of QRK5 editor. I wish to thank those of you that did help with news and I wish my successor luck. Until advised of alternative arrangements please send your news to the Secretary WIA, Victoria Division, 412 Brunswick Street, Fitzroy.

WHAT ABOUT THE 80s

There has been a lot of discussion on and off the air re the direction the WIA should take in the eighties. Here follow suggestions I have heard; reported verbatim as far as possible.

"Adopt a constitution for the 80s not the 20s."

"Drop state divisions and run strictly as a federal body."

"Get out and market membership."

"Reduce fees for war pensioners, superannuatees and others on semi-fixed incomes."

Brighten up meetings.

"Control facilities over which the WIA has control."

"Drop federal and state divisions and let local radio clubs run things."

Charge more fees."

Improve and increase benefits for members.

"It's OK, leave it alone."

"Reduce fees for members with over 20 years continuous membership." (I like this one.)

The above are but a few. I deliberately put constitutional change first because I believe it is vital to our survival. The others are at random and I don't agree with them all, but believe everyone's ideas should be considered.

CHIEF THUG STANDS DOWN!

It has been leaked that the founding father and benevolent dictator known as the CHIEF THUG has, in the tradition of all great leaders of men, decided to stand down and allow new blood a chance to lead. Honours and awards have been heaped on his head, including honorary life membership and the most noble order of the helical whip with diamond cluster.

Naturally as Chief Thug he approved these awards before standing down. A power struggle will follow (THUGS don't have elections) and the fittest and most able will assume command some time in mid-February 1981.

NEW COUNCILLORS?

I received the following note from VK3JN:

"I suggest that you appeal through the column to amateurs who **might** make good councillors for 1981/82. We are not looking for expertise — just willingness to give time and effort. There are few council positions which have expertise as a prerequisite — for the most part the various responsibilities are assigned and we rely on the individual's initiative and honesty to do that job to his best ability."

Thank you, Peter, for your contribution. To keep the record straight, I must say that I disagree on one point. I think that expertise is necessary — giving time and effort to interminable waffle at meetings is, in my opinion, of little value to the WIA.

Readers can make their own decision. Two points of view have been expressed and are open for discussion.

LIBRARY HELP NEEDED

Your library, established over three years ago, is now well stocked and running smoothly. I would like someone with a genuine interest to take over its management so that I can devote some time to a new project. A period of about two months is available for hand-over/take-over and mutual assistance. It is quite a pleasant job and it would be a pity to let it degenerate now it is established. Interested amateurs should contact VK3WW QTHR.

ASPIRANTS

Good luck to all who are sitting for the various examinations this month. The amateurs in VK3 wish you all a successful result.

FINALE

I would like to thank all readers for their comments and encouragement during the period I have been writing this column and wish my successor all the best.

73 ES VA Mike VK3WW. ■

EDITOR'S NOTE

We regret that Mike has been embarrassed by the separate publication of VK3 news. Sometimes the only practical alternative to this is to not publish.

Photographs for AR

DON'T KEEP THEM TO YOURSELF

Send them in – NOW

QSP

RADIATION

An extract from an article in September 1980 QST is reproduced for information (the data derives from US Federal sources).

"**Ionizing Radition:** Ionization occurs when radiation displaces an electron from an atom. These electrons may, in turn, ionize other atoms, approximately 30 electron volts (eV) of energy (depending on the particular element) are required to ionize one atom. Radiation with **short wavelengths** and **high energy**, such as X-rays and gamma rays, contain sufficient energy to cause ionization.

Non-Ionizing Radiation: Radiation with **longer wavelengths** and **less energy**, such as ultraviolet, infrared and radio frequencies, do not possess enough energy to produce ionization.

The term non-ionizing radiation, while accurate, is confusing to the public because most people do not know the definitions for the two types of radiation.

It is suggested that, in the future, whenever radio amateurs come in contact with the public in any media, or at meetings, that the words non-ionizing radiation be replaced with either electromagnetic energy or radio frequency energy. These more-descriptive terms will help the public understand the significant difference in energy levels between the two types of radiation." ■

LICENCES

According to P. and T. Department statistics for 30th June, 1980, the number of amateur licences issued in Australia totalled 13 910 compared with 12 062 on the same date the previous year — an increase of 15 per cent. Of these, 5 521 (5,978) were full calls, 3,483 (3,109) restricted and 3,906 (2 975) were Novice. For the States and Territories the totals were ACT 312 (269), NSW 4 514 (4,043), Vic. 3,986 (3,425), Qld 1,960 (1,532), SA 1,559 (1,324), WA 980 (848), Tas. 406 (376) and NT 157 (228). Antarctica and other territories accounted for 37 (24). The figures in brackets were at 31/6/1979. It will be noted that the Novice total for the year increased by 31 per cent, the restricted by 10 per cent and full calls by 9 per cent. The largest percentages increases were in the Novice Licences — NT more than doubled, Qld reflected a 51 per cent increase, WA 49 per cent., Vic 29 per cent, SA 30 per cent, NSW 19 per cent and ACT 55 per cent. In Qld restricted licences increased by 25 per cent and in Vic. by 15 per cent. Qld's full calls increased by 14 per cent. Percentage increases in the State totals were headed by Qld with 28 per cent, followed by ACT with 19 per cent, SA with 16 per cent and Vic. by 16 per cent, whilst NT fell by 31 per cent. CB licences dropped from 173,507 to 78,093. ■

BROADCASTERS AGAIN

"Operation by Canadian amateurs on 75 metres between 3950 and 4000 kHz is likely to be eliminated as a result of the CBC's plan to use two frequencies in that range for internal shortwave broadcasts. The CBC hopes to have 250 kilowatt transmitters operating on 75 by mid-1981." — Ham Radio, April 1980. This was reported in QST February 1980 in the WARC report. This was one of the footnotes, and there are now many of them, affecting amateur bands which, in this case was strongly opposed but got through subject to there being no harmful interference to other services, including amateur. Fortunately this does not affect us in Region 3 anyway but we will hear a lot more about the outcome from WARC 79, some of which will come as a surprise to those who did not study the reports in detail. ■

DUKE OF EDINBURGH AWARD

A special exhibition station — GB2DEA — will operate all bands from HMS Belfast on the river Thames on 5th, 6th and 7th February and 7th, 8th and 9th March to commemorate the 25th anniversary of the Duke of Edinburgh Award. The Duke has been invited to be in attendance if possible on 5th February, the actual anniversary date. Hopefully contact can be made with as many amateurs as possible (special QSL being designed, particularly those who have previously won an Award under the Scheme. ■

YOU and DX

G (Nick) Nichols VK6XI
6 Briar Place Ferndale, WA 6155.

Looking at the mail this month I just can't wait for the onset of winter, there again with plenty of barbecue days left before the cold breezes finally force us back to the warmth of a linear I'm quite sure I'll get to use all the firelighters the postie was good enough to deliver. Hello you say, this bloke's at it again, too much hot sun and cold beer, it's a pity but that isn't the case at all, the firelighters to which I refer are of course QSLs. Or rather, lumps of cardboard purporting to be.

Did you know it's possible to have a QSO — CW, FSK, AM, LSB, USB — one way of course, (couldn't possibly have been 2X I don't have AM facilities) on a certain undecipherable date at a time crossed, corrected, scrubbed and coffee cup ringed, on a blank band; and being from such an exotic, utopian area of the world the station feels it his absolute duty to protect it from all-comers (particularly amateurs), so he avoids making any notation whatsoever as to his location during the operating stint? Oh well, the cards come in handy for stopping the rig, linear, shack chair or whatever (you know ,the one with one leg shorter than the other three) from wobbling around

Probably several readers will be jumping to defend the rare station and his ignorance of the requirements QSL-wise for award chasing. The problem is that the great majority were from QSL Managers Ws, Gs and others, those unsung heroes who for the love of amateur radio undertake to do the QSLing chores for the rare one. However, with a few notable exceptions, about the only thing they seem interested in is the coloured contents of the incoming mail (and I'm not referring to your QSL) and how much profit they can make out of it. Like several who received direct airmail QSLs with IRCs or the like and SAE and then (not wishing to entrust your precious QSL to the postal pixies) send it back via the bureau — they don't trust them either, so they pocket the IRCs, green stamps or whatever What is really odd is that cards sent to them via the bureau seem for the most part to go "astray" (astray is the new name for a receptacle more commonly known as the Manager's waste paper bin)

This is in no way to be read as a total condemnation of QSL managers for I'm glad to say there are exceptions. However without doubt they are fast becoming an endangered species

FACT AND FICTION

South Sandwich Island activity heavily tipped but by the time this goes to print may well have been and gone, rumoured call sign VP8SII with several operators at the helm. Rumours of activity from Walawi by 7Q7AE and LW — doubtful as present indications are that licences have not been re-issued but as both calls relate to members of the constabulary there is still a good possibility that they are legit. Activity from Turkey still a no-no; hopefully the problems there will be resolved soon.

ON THE BANDS

10 METRES

Hopefully this month will show a rapid improvement of this band (well, it can't get any worse) occasionally (very) for the few 10 metre DX fanatics remaining, there were a few new ones to add to their bag. One Phone FP0FSZ, TF3YH, 9G1RT, A51PN, 4U1ITU, A7XD, OH1MA/CT3, whilst on CW C21NI, HZ1HZ, 5Z4MM, VK3DCV/Lord Howe, KP4KK/DU2, OY6FRA and RG6G were of interest.

15 METRES

Also patchy and subject to quite unusual propagation at times. On Phone 3D2GM, VP5SDA/HK1, FO0KU, H18GGL and CW A4XIH, CO7FM, EA8QJ, H44BP, T3AF, VP2KAC, VP9DR and ZP5PX should have certainly kept the keyers warm and dusted off.

20 METRES

As usual plenty to be had for all, CW in particular was worthy of lots of attention; A35VU, A4XIR, EA9EU, HC2XA, KX6SS, KA5 BPE/VP2A, VP2KAA, VP2AZG, PJ2CZ, TU4JJ, EL2CA and CE0COJ were all generating small pile-ups.

40 METRES

Stick to CW on this band also; Phone a virtual wipeout due to heavy commercial; QRM available on CW were CR9B, T2AAF, VS6JR, 4S7MX, A35VU, C21NI, LZ7A, A9XCE, NP4A and 9Y4VT — quite a nice haul by anyone's standards.

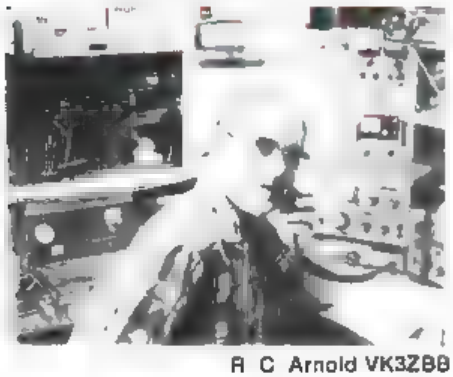
80 METRES

Excellent, if intermittent, propagation available, again CW the mode most worthy of a good listen, EA4NN, TA4XT, 4N3P, VS6DO (well over S9, ZSs, C21NI, HS4AMI, 5T5CJ, 8QZBD and many others.

QSL INFORMATION

C31MK — via EA3WZ.
C5ACO — via W2TK.
C6ANU - via Box 703, Nassau.
D68AM — Box 501, Moroni.
FB8XY — via F6CIU.
FC0FRV — via DJZAA.
F80DZ — via DK9KD.
FK8CP — via Box 945, Noumea.
FK8DD — via WB3JUK.
FK8DO via N4TN.
FM7AV — via F6BFH.
FO8NFU — Box 426, Papeete.
FO8NFU — Box 426, Papeete.
FR7BP — via W0AX.
HI3JR Box 945, Santiago
HI8LC - Box 88, Santo Domingo, or via W2KF
HP2XSG — via WB2DCP.
HZ1AB — via K8PYD
H5AA via ZS4MG
LU3ZY via LU2CN.
P29KM — via Box 248, Lae
SV0AT via AF4B
TI2AV Box 4511, San Jose
T3AT via G3XZE
VK0KH via VK5WV.
VP1KI - via Box 546, Belize
VP2MGV — via K3VMG
VP2MM - via W1CDC.
VQ9JW — via KA3EDN.
VK9TT — via KB5MZ
VS5DD — via G4EFE
YJ8IND — Box 39, Vila
YJ8IR — via VK3BIR
ZK1CF — via ZL2AQF
ZK2TW — via ZL1AZV
ZS1XR — via N7RO
3B6CD — via 3B8CF
3D6AX — via WA5IEV
3D6BS — via N7RO
457MX — via SM3CXS
4U1UN — via W2MZV
5Z4PS — via Box 14425, Nairobi.
5Z4YV — via JA2AJA
6O0OX — via I2YAE
9J2BO — via W6ORD.
9K2GR — via DK1OW
9M6MH — via Box 678, Kota Kinabalu
9M8PW — via G4DXC, or Box 347, Kuching
9U5AV — via K5VT
9VIVV — via Box 214, Jalan-Kayu, Singapore 9180.
9Y4NP — via W3HNK
A4XIZ — via Box 981, Muscat.
VK9NC — via VK4VA
KV4AA — via K6PBT.
VQ9MM — via N0MM.
YJ8SS — via JA7SGV.
3DZFJ — via JA7SGV.
KC6YC — via W7EJ
72AAD — via W9GW
6D7LCH — via WD8NKT
PJ2CC — via AA4M
4S7KK — via 42FV.
A35FB — via JA7SGV
9GIDY — via PO Box 2949, Accra.
VS6JR — via WA4QMO
7P8BJ — via Box 39, Maseru
3D2GM — via PA0GMM
VP8PK — via JA0BFZ.
EA6BH — via DL7FT
T2AAF — via JA7SGV
VK3DCU/2 — via K2UO.
FP0FSZ — via VO1FB
KP4KK/DU2 — via WA3HUP.
A4XIZ — Box 981, Muscat
HP1XOX — Box 632, APO Miami Florida, USA 34004.
A4XIH — via G4GIR
A35VU, ZK2VU — via DL2RM.
VK3DCU/2LH — via K2UO
C21NI via JA7SGV
6Y5YL — via N2MM
VP2KAC — via N4RJ
4S7VV — via JA5BJC.
5Z4MM via K1MM.
WH2AVP via JA1NVG ■

AMATEUR SATELLITES



R C Arnold VK3ZBB

During December both our satellites continued to operate satisfactorily although some unexpected mode switching was apparent on Oscar 7 from time to time

Activity has been at quite a high level, with stations from all States being heard.

We were pleased to see the return of VK0GW and also 9M2CR Some contacts from the northern parts of Australia have been made with Japan and from JR6 to VK3

As the orbit parameters of Oscar 8 appear to have settled down for the time being, I am risking the publication of forward predictions for February and hope these will turn out to be reasonably correct

FEBRUARY 1981

	OSCAR 7			OSCAR 8		
Date	Orb. No.	Eqx Z	Eqx °W	Orb. No.	Eqx Z	Eqx °W
1	28430	0050	88	14834	0006	58
8	28518	0125	97	14932	0040	67
15	28605	0005	77	15030	0113	75
22	28693	0039	86	15127	0003	58

The most exciting news we have received for some time is that Oscar Phase 3B satellite is scheduled to be launched on the 24th February, 1982. The satellite will be mounted on a Firewheel satellite which is being produced at the Max Plank Institute in Germany, together with "ECS-1" by the Iriane L7 vehicle. The original Phase 3A satellite was mounted at the side of the Firewheel, but in the case of Phase 3B it will be mounted on top of the primary satellite.

The Ariane rocket is similar to the one that failed earlier this year, but there will be several additional trials, LO3 to LO6, prior to 1982 to give the manufacturers an opportunity to iron out any possible further troubles.

It has now been ascertained that the failure of the Ariane launch vehicle in May which resulted in the loss of Phase 3A satellite was the result of imperfect manufacturing tolerances in the engine injection nozzles. The engine manufacturers have been able to duplicate this malfunction by telemetry data recorded during recent ground tests. The identification of this problem will enable further launches to proceed without delay.

Harry JA1ANG tells me that he has had a good AO7 Mode B QSO with **VK4TL** and, having worked VK5 some time ago, he is concentrating on VK3 contacts. Harry is invariably on CW but can always change over to SSB. His downlink frequency will be around 144.93 or 145.95. I hope one of the VK3 stations can make a "first" with Harry.

A reminder that the AMSAT nets are as follows:—

JAMSAT — Sunday at 1100Z on 14 275 JA1ANG.

SW Pacific — Saturday at 2200Z on 28.880 W6CG (this is Sunday morning in VK).

Australia — Sunday at 1000Z on 7065 VK3ACR.

UOSAT is still on schedule for launch on September 15, 1981, and its beacon frequencies will be as follows —

450 MW general beacon (telemetry) 145.825 MHz

400 MW engineering beacon (telemetry) 435.025 MHz.

100 MW HF beacon experiments 7 0025, 14.005, 21 0075 and 28 010

"S" and "X" beacons also planned.

"Orbit" magazine records the following life members of AMSAT from Australia.— **W. L. Robb VK3YR, P. Sgarlata VK2YRO, R. K. Robbins VK3ARR, C. J. Robinson VK3ACR.**

These members have contributed $200 or more to AMSAT and we are grateful for their assistance towards the future satellite programme

Thank you to all who help to make these notes possible and, in particular, **VK3ACR** and **VK3PJ.** ■

A Helping Hand

Mr John Clarke VK2DBZ, a Newcastle radio amateur, aged 81, was having extreme difficulty in obtaining finance for the purchase of a new transceiver Apparently finance companies are reluctant to lend money to people of this age

It appears that John Clarke's ageing FT75B would not outlast him, he himself having served in two world wars.

Dick Smith Managing Director of the Dick Smith Electronics Group, heard about his efforts to stay on air, and decided to do something about it Consequently, he presented him with a new Yaesu FT101Z transceiver, at no charge

Photo shows Mr. Dick Smith presenting Mr John Clarke (left) with the Yaesu FT101Z transceiver, with Jon Hennell VK2ZHF, Amateur Radio Manager, looking on ■

Close-up

Neil Town VK3ANK

CQ . . CQ . . . CQ . . . This is VK3BH . Victor . KILO . Three . . . Bravo . . Hotel.

Surely one for the record books — a budgee whose squeaky voice can be heard on the other side of the world.

Bert Horan VK3BH is training his pet budgee to make his CQ calls.

Some operators have built automatic gear for making the CQ call. Bert has gone one better, he gets his budgee to do the heavy work.

When Bert's voice is not using the clipped phrases of an ANA Captain in VHF contact with flight control as he zooms around Australia in ANA jets, he may be heard on the amateur radio frequencies chatting away with his friends in all parts of the world, with budgee causing a little local QRN in the background.

At the moment Bert is giving budgee a little dual instruction to complete the full CQ call

So if you happen to be browsing around the bands and a hear a scratchy effeminate voice finishing off a QSO with "73 old man, this is Victor . . . Kilo . . . Three . . . Bravo . . . Hotel", then you'll know that Bert's budgee has got his ticket. ■

QSP

HF BAND SUB-ALLOCATIONS USA

"Phone-band expansion has been a recurring topic for the past decade Back in 1971 the League and the FCC both proposed substantial expansion of the HF phone bands, but the following year the Commission drew in its horns and adopted a much more modest plan Now that we are in the post-WARC era, the pressures are stronger and the arguments more compelling than ever for some adjustments to the phone sub-bands. But what if, in response to these pressures, the Commission were to eliminate all mode restrictions in the HF bands? Are we ready for that?

Unfortunately we think not. There is no national mechanism, not even ARRL, for 'voluntarily developing sharing arrangements and band plans' which has such universal acceptance that it could replace the FCC Rules in the HF bands It is not that we need FCC Monitoring Stations policing the bands to keep us in our place, it's simply that more amateurs will abide by an FCC regulation than will follow a voluntary 'band plan' And, in the case of the HF bands, it would only take a handful of troublemakers to cause nation-wide and world-wide problems .—From Editorial in QST, August 1980. ■

VHF-UHF
An expanding world

Eric Jamieson,
VK5LP
Forreston, S.A. 5233

FEBRUARY 1981

VHF/UHF BEACONS

Freq.	Call Sign — Location
28.335	VK2WI — Sydney *
50.005	H44HIR — Honiara
50.055	ZL1UHF — Auckland
50.100	KH6EQI — Pearl Harbour
50.105	KC4AAD — McMurdo, Antarctica
50.110	KH0AB — Saipan
50.144	KC6IN — Caroline Is.
51.022	ZL1UHF — Auckland †
51.999	YJ8PV — Vanuata §
52.013	P29SIX — New Guinea *
52.150	VK5KK — Arthurton
52.200	VK6VF — Darwin
52.250	ZL2VHM — Palmerston North
52.300	VK6RTV — Perth
52.320	VK6RTT — Carnarvon *
52.330	VK3RGG — Geelong
52.350	VK6RTU — Kalgoorlie
52.370	VK7RST — Hobart *
52.400	VK7RNT — Launceston
52.425	VK2RAB — Gunnedah *
52.435	VK3OT — Hamilton §
52.440	VK4RTL — Townsville
52.450	VK2WI — Sydney
52.500	JA2IGY — Mie
52.500	ZL2VHM — Palmerston North
52.510	ZL2MHF — Mt. Climie
52.800	VK6RTW — Albany
53.000	VK5VF — Mt. Lofty
144.010	VK2WI — Sydney
144.182	VK3RGI — Gippsland
144.400	VK4RTT — Mt. Mowbullah
144.475	VK1RTA — Canberra
144.500	VK6RTW — Albany
144.600	VK6RTT — Carnarvon
144.700	VK3RTG — Vermont
144.800	VK5VF — Mt. Lofty
144.900	VK7RTX — Launceston
145.000	VK6RTV — Perth
147.400	VK2RCW — Sydney
432.400	VK4RBB — Brisbane
432.450	VK3RMB — Mt. Bunningyong
10.3 GHz	VK6RVF — Perth

The following changes are noted to the beacon list this month

* Denotes a new listing, and VK2WI on 28.335 MHz has been included; although not really VHF the 28 MHz band is often a pointer towards possible 6 metre openings. The beacon has been observed in VK5 several times recently during 6 metre openings. The P29SIX beacon on 52.013 is included for the first time. It is understood to have been allocated 52.029 but recent reports indicate it is still being heard on 52.013. VK7RST in Hobart appears on 52.370 for the first time, and I have been advised VK2RAB in Gunnedah is due to operate on 52.425 about this time as its licence was expected early in the New Year.

† Indicates a change of frequency and ZL1UHF was observed on 51.022 recently. It also seems VK6RTT at Carnarvon has come down the band and is now to be found on 52.320 MHz.

§ Draws your attention to the fact that a report has been received of a YJ8 beacon on 52.040, whether this is YJ8PV with a frequency change or another beacon has not been established at this time.

The beacon originated by Steve Gregory at Hamilton has reverted to the call sign of VK3OT from VK3RWV, and operates on 52.435 MHz.

I received several reports that during the massive 6 metre openings at the end of December/early January, it was possible to hear all the Australian 6 metre beacons at the one time, plus several ZL beacons. Plenty of co-channel interference was also noted on the various channel 0 stations, and in particular the new Sydney channel 0 causing plenty of problems.

SIX METRES

Since the last information to be published had a cut-off date of 16/11/80 so much has happened on six metres that it is difficult to know where to start and stop. The early part of what is generally considered the "Es season" was fairly normal, with openings from one place or another. One early plum was the working of **KH6IAA** by Adelaide stations and **VK5LP** who actually arrived home from work in time for once! AI was worked from 0740Z up to S7. About the same time **VK7AE** worked **ZL4LV**. The KH6EQI beacon on 50.100 was S9.

16/11: ZLs in for most of day, also into VK3. W stations were copying ZL TV during the morning, while JA worked as far as Arizona, USA. **XE1GE** copied **KH6EQI** beacon, subsequently worked **ZL4LY** at 2130Z. **W6TYX** to **KG6DX**. Things were just starting to warm up!

22/11: **VK5ZWZ** worked **YJ8PD**. 26/11: Great day for Australia — **VK6OX** 52.005 worked into UK split frequency to 10 metres — see special box for details. 29/11 **Dick VK5ARZ** reported hearing VK2 working N6CT on 52 MHz. **VK5ZBU** heard by **VE1ASJ** at 0530Z. **VK4RO** to VE1, etc. (more on this later). Report of **Andy VE1ASJ** and **VK5RO** being heard by **G4BPY**. Report received 3D2JT returning to W6.

30/11: 0300Z N6CT heard, same time strong TV signals from ZL. **Wayne VK6WD** hearing KH6. Good Es between VK5 and VK6. **HB9QQ** Switzerland reported on 28.885 hearing **VK5ARZ** on 52.005, but signals hard to copy due to aurora.

VK6ZKO worked **KH6IAA** 0558Z 4 x 1 both ways. At 0601Z **VK6WD** to **KH6IAA** 419 both ways. **Don 6HK** unable to copy KH6 due to power line noise! JAs 0930Z. **W6HTH**/KH6 heard at 0530Z. Looked as if things were rolling.

Spasmodic openings around Australia for next few days which is about normal for time of year. ZL available much more often than usual, being worked up and down eastern coast of VK as well as VK5. 12/12: Good Es day, very strong from VK2, ZL again. 14/12 VK2 and VK4 most of day, very good opening to ZL from VK5 from 0600Z with ZL1, 2, 3 and 4 worked to S9. 0002 to 0018Z JA1, JA2, JH2 and JA7 to VK5 for a very early opening.

Mixture of signals again for the next week or so leading through to Christmas, with 24/12 and 25/12 rather quiet in VK5. 26/12, usually a prime 6 metre day, also a bit quiet. VK5 had to be content with a VK6 opening plus good 2 metre signs to Mt. Gambier. Same on 27/12 plus a few ZLs.

Then it happened. All hell was let loose on 28/12 starting around 0000Z to VK2, then to VK4, VK8, H44PT at 0659Z, ZL2, ZL1, ZL3, ZL4, VK3, VK7, VK5, VK1, then back to ZL all districts again 0900Z, most VK areas again, back to ZL 1000Z, VK3 short skip, more ZL, VK2, more ZL! VK2 worked JA 0030Z, also heard in VK4. H44PT worked VK9ZD, VK2, 3, 4 and 5. Report of JA to VK3AMK during the morning. Gee, what a tiring day. Nearly 80 contacts at VK5LP.

But the party wasn't finished! It started all over again next day on 29/12. VK8 worked ZL, and that's a long haul. All VK and ZL districts worked again, most areas working everything available. VK2 and VK3 worked JA, reported heard in VK5 also. **Bob VK6BE** said it was the best Es for 25 years, he worked VK1, 2, 3, 4, 5, 6 (Carnarvon), ZL1 and ZL2. **VK5AN** worked VK2, VK4 and VK5 on 6 metres RTTY. Band was still wide open when I returned from work and got on the air at 0822Z to work VK1ZEJ, then followed 40 more contacts with the last one at 1327 to **VK3ATN** on 6 metres, with VK1, 2, 3, 4, 5, 6 being worked.

Those home from work on 30/12 and 31/12 continued to have a ball, with signals appearing from everywhere. On New Year's Day, 1/1/81, the band opened early at 0003Z to **VK3AOS**, then went a bit quiet until 0300Z when VK8 appeared and then followed one of the best openings on 6 metres for a long time between VK5 and VK8 in Albany. VK4 worked 0400 onwards, then back to VK6 at 0600Z. A massive dog-pile occurred on 52.050 at 0707Z when **VK5LP** latched on to H44PT and alerted the waiting multitudes that H44 was again available. After I worked him he disappeared from the VK5 scene for a while when **Steve VK3OT** grabbed him. In the meantime I worked H44DX but don't think many others did. In the meantime

H44PT arrived on the scene again, and boy was it on then, with stations from everywhere struggling to work Peter! There were quite a few ruffled feathers as a result of that encounter, but peace did eventually reign once more when H44PT disappeared about half an hour later. All that was left were a few VK4 signals. **Bob VK6BE** worked 70 stations that day including three ZLs. **VK4ZYA** mobile worked **VK8GB** for one of the few VK8 encounters. P29 was worked by VK3 and probably by other eastern States.

FK8 APPEARS

Most operators by now would have been reasonably content with the Es conditions of the past week, but there was still more to come. 2/1/81 proved to be a further outstanding day. All VK call areas 1 to 8 and ZL1 to 4, plus H44, P29, YJ8, and to cap it all FK8, three stations from there in fact! Seems the first to be worked in VK5 anyway was FK8AB, who was 5 x 6 at 0412Z, and being heard for up to ¾ hour. Many problems existed for those lucky enough to work them or unlucky enough not to work them, in that there was an extensive VK3 backscatter opening at the same time, and many operators had their tempers tested to the limit it seems. But this situation is bound to happen when rare stations can be heard over such a vast area at the same time, with the distinct possibility of VK stations from different areas both calling together but unable to hear one another whilst both or all are able to hear the DX station simultaneously. I was at work but it could have been interesting to have been sitting back listening!

P29DJ finally faded out at 0820Z. As far as I can recall the 2nd January will be long remembered for a day when the whole of Australia was covered with a Es cloud, extending right out into the Pacific to allow contacts to be made with at least five overseas countries, and possibly six if any JAs were worked, and that would be a pretty fair record for Australia. The pity of it all was that we received word that 3D2 has not been active for the past two months on 6 metres otherwise 3D2 might well have been worked too.

And so on to 3/1/81. The Es was so tired it hardly showed up at all except to provide several contacts between VK5 and VK6 in Albany, but little else. 4/1, the cut-off point for these notes, recovered from all the activity to allow a few VK5 to VK4 contacts around 0030Z, then nothing. Whether periods of high solar activity also tend to increase the amount of backscatter - but this Es season" has been of increased interest due to the very extensive backscatter contacts, extending as far away as New Zealand at times. Truly a very interesting year, and one which has confounded all the predictions so far made!

TWO METRES VERY ACTIVE

Six metres has not had all the activity to itself by any means this year. There has been a very large amount of 144 MHz activity and whilst it does not have the glamour of the far ranging contacts of six metres, many operators have been very satisfied with the results obtained.

11/12 saw the start of general 2 metre activity from VK5 to VK3 with the working of **Roy VK3AOS, Andrew VK3YUZ** and **John VK3TN.** VK5LP also worked VK3AOS on 70 cm 5 x 5 both ways. 23/12 saw good signals from Adelaide to Pt. Pirie and points beyond to **Jim VK5ZMJ** (144 and 432 MHz) and **Garry VK5AS.** 24/12 **David VK5CK** started off at 2055Z by working through channel 5 and 8 repeaters to **VK3AUG** and **VK3ACM,** then on 144 SSB to **VK3BFY, VK3HV, VK3BMU, VK3YII, VK3ATN,** and the conditions continued through to 25/12 to **VK3ALZ/P, VK3YII, VK3BKF, VK3ATN, VK3HV, VK3DET, VK3ZVN, VK3ZBJ, VK3XQ,** and **VK7DA** was amongst the last to be worked at 0100Z which is 11.30 a.m. local! There was not the slightest sign of a signal from any of these stations at the VK5LP establishment indicating a very selective pattern of reception.

26/12 provided good contacts to the SE of SA with **VK5NC, VK5MC,** and two new stations we were pleased to see on 2 metres, namely **Trevor VK5ATD** at Rendlesham and **Ray VK5ADR** at Naracoorte.

SPORADIC E TO PERTH

At 2240Z on 28/12 (actually 0910 local on 29/12) 2 metres opened to Perth for a short period to provide contacts to **VK6SM, VK6HK and VK6KZ** from **VK5ZDR and VK5RO,** and heard by **VK5LP** and others but due to the short opening not enough time for everyone to work them. **VK6HK** was the strongest at S9 and it seems very likely the contacts were made by Es. If this is so it will be the first recorded such contacts for over 20 years.

The scene now shifts to 31/12 with news of another Es 144 MHz opening, this time between **Roy VK3AOS** and **Steven VK4ZSH** at 0536Z 5 x 9 + 20 dB, and being available for half an hour. Typical VK2 to VK3 backscatter contacts were being made at the time.

As six metres does have its incredible days, so too it seems does two metres, and now I refer to 3/1/81, when the band was open all day to VK6, and in the evening to VK3 as well. First real contacts started out around 0400Z, but previous to that I just missed out on a frantic phone call from **Wal VK6KK** who wanted to tell us the VK5 two metre beacon was S9+ in Perth on Es. That's what I get for going out to purchase groceries on a Saturday morning! Anyway, first contact to **VK6ZGY** at 0400 on 52.061 MHz, followed a few minutes later by a two metre contact to the same station — in other words, the band was open on both 6 and 2 metres simultaneously to Albany, 5 x 4 on six, 5 x 2 on two! Then as the afternoon wore on signals began increasing in signal strength to spend a lot of time around S9. Stations worked were **VK6XY, VK6WG, VK6ZSP, VK6KJ, VK6ZEL/P, VK6BE, VK6QA/P,** a total of eight stations. Last contact was with **VK6XY** at 1400Z with signals still 5 x 9. VK5 managed to muster up quite a few 2 metre stations to share in the good times, including VK5s ZRO, ZPS, RO, ZDR, LP, ZPE, ALW, AKM, AMK, ZMP, CI, AGM. **Gerry VK5AGM** in fact completed building his 2 metre gear especially for the occasion, made up a dipole antenna from a piece of fencing wire, ran 3W from his handbag and worked **VK6BE, VK6ZSP,** and naturally was more than satisfied! **VK5CK,** who has for months led the field working 2 metres into Victoria, met his match this time when he found the blocking power of Mt. Lofty on his western front more than sufficient to prevent any contacts to VK6. Bad luck, David, now you know how VK5LP feels when he has to sit back and listen to you work so many VK3 stations!

Throughout the December period, particularly the Ross Hull Contest period, early morning contacts have been taking place on a regular basis from 2030Z between **VK3ATN** and **VK5ZDR, VK5RO, VK5AKM** and **VK5LP** on 144 MHz and between **VK3ATN** and **VK5LP** on 432 MHz. The party was joined by **VK3AOS** and **VK3TN** at times.

During the big opening to VK6 on 3/1 **Bob VK5ZRO** had three 432 MHz contacts, to **VK6WG** at 0735Z and 1220Z, **VK6KJ** at 0735Z and **VK6XY** at 1345Z. Good work, Bob. Also heard rumours **Reg VK5QR** and **VK6WG** were trying 1296 MHz and higher bands during that period.

Also on the 432 MHz scene **David VK5CK** is constructing a new antenna system, using four 16 element yagis in an H frame, which should give him an edge on anyone else around this country at present.

TIT-BITS FROM THE OPENINGS

A few little items heard during the recent good openings on 6 and 2 metres. H44PT uses a 4CX250R on 6 metres to give 400 watts PEP to a 5 element beam . . . Melbourne FM stations heard in Queensland on 2/1/81 . . . **Denis VK4ACE** is leaving Mt. Isa soon, leaving **Eddie VK4LX** as only 6 metre op. there . . . **VK5ZPW** hearing VK1 repeater on 29/12 . . . VK2 working into ZL on 144 and FM on 4/12/80 . . . **Wally VK6YS** operating from Mt. Newman in north of WA.

QUEENSLAND 432 RECORD

News has finally come to hand about a contact between **Rick VK4RR** and **Wayne P29ZWW** on 3/11/80 at 0815Z on 432 MHz over a distance of 979 km. This represents a Queensland record and also a new country for a 432 MHz contact. Rick is south of Cairns. **Ian VK4AFC,** north of Cairns, also worked P29ZWW. Contact had been maintained over a period on 2 metres which eventually culminated in the 432 MHz contact being made. Congratulations to you both. May this only be the start of an era.

VK6OX WORKS G4BPY

Carnarvon beacon VK6RTT granted permission to operate 52.320 MHz on 25/11/80. On 26/11/80, **Gordon G4BPY** in Staffordshire, UK, copied **VK6RTT** from 0959 to 1010Z, peaking S8! **VK6OX** contacted Gordon on 28.885 at 1028Z to confirm he had heard the right signals. Arrangements made to monitor 28.885 next day.

At 0930Z 27/11/80 **VK6OX** called **G4BPY** on 10 metres to see if anything was happening, and advised beacon was being received at S5. **Andy VK6OX** fired up on 52.005 on CW at 0936Z, and Gordon relayed his signals back on 10 metres, delay and all! He reported VK6OX at 599 and Andy returned 5 x 3 for his signals on 28.885. On switching to phone Gordon reported Andy 5 x 9.

At 0946Z Andy worked **Brian G3COJ**, sent 5 x 3, received 5 x 5. At 0953Z worked G5KW, sent 4 x 3 received 5 x 5. **Ken G5KW** was operating portable from the Scilly Isles, which are off the south-west tip of UK. Distance about 14.200 km Great Circle Bearing. No other stations worked. Gordon continued to hear Andy calling CQ until 1004Z.

QSLs have been received for all three contacts, and **Gordon G4BPY** sent a tape recording which included Andy's 6 metre signals, the VK6RTT beacon, and VK6RTV beacon he heard in 1978.

Our congratulations to Andy and the boys in G-land for their efforts in making these contacts, and there seems little doubt had those in the UK been able to transmit on 52 MHz then two-way contacts would have been established on that band.

NEWS FROM THE WEST

Two letters to hand this month, one from **Tony VK6BV** in Northam and the other from **Andy VK6OX**, in which it is possible to compare the 2 metre operations of Andy on the coastline and able to look up and down the coast, and that of Tony at Northam, about 100 km inland. It is quite certain the coastal regions have many advantages as evidenced by the amount of coastal ducting from Carnarvon 8/11 VK6OX 0124 to 0229Z ducting to VK6WD, VK6HK and VK6ZKO. Nothing at VK6BV. Later from 1102 to 1253Z a path opened between Carnarvon and Northam with signals 5 x 9, also to Perth area. 19/11 VK6OX to VK6ZEL, VK6WD, VK6KZ, VK6HQ, VK6ZGG, VK6FM, VK6ZKO, VK6QA between 1110 and 1400Z. Nothing at Northam. 20/11 VK6OX to VK6ZFY, VK6HK, VK6ZKO, VK6QA, VK6WD and this time to VK6BV in Northam. Similar conditions existed between 0917 and 1330Z on 21/11 when VK6OX worked 12 two metre stations but not VK6BV. So there is plenty of mounting evidence to show coastal ducting is really coastal and often doesn't move very far inland, and this seems to apply to those north-south paths the same as on the east-west paths between Albany and Adelaide. **Tony VK6BV** also reports reception of VK3RGG beacon on 144.700 from 0300 to 0311Z on 16/11 at 529. No response to CQ calls! That's a long way for a 2 metre signal of any sort.

It is noted also that **Andy VK6OX** will shortly be transferring to Kyogle in NSW, where he hopes to sample the DX from the other side of the Continent. I am sure we are all grateful to Andy for keeping us informed of northern VK6 activity and wish him well in his new location.

NEWS FROM QUEENSLAND

Ross VK4RO has written in response to my request for information on what happened on VHF from Ayr and other parts of North Queensland. JAs were worked during each and every month of 1980. He now has 22 countries confirmed on 6 metres, with 5 new ones this year, VK9 Willis Island, T3, FK8, VE and KHO Saipan.

Ross enclosed a letter from George KB9DW/VE4, who was portable in Winnipeg when he worked him. He reported "Many thanks for my first Australian contact. Only just recently got on 6 metres, and you were my third contact on six, the first two were in Texas, USA. Furthermore, even though I am fairly active on 80 through 10 metres you were my first Australian contact on any band!"

Now follows a run-down of what **Ross VK4RO** worked in 1980, and as it is first-hand unpublished material I make no apologies for setting it out in detail as it gives those operators, particularly in the southern regions, some idea of what goes on in the north, out of their hearing!

31/1/80: First JA for year. 12/3: VS6EZ, VS6EG, KG6DX, VK8GB (backscatter) 15/3: VK9XT (Christmas Is.) backscatter 17/3: VK6OX backscatter, K9PNT/DU2, VS6EG, VS6FX, YC1BMI. 22/3: KX6QC 25/3: Heard K6HCP 539 on 50 MHz, same again on 28/3. 29/3: KG6JIQ/KHO Saipan Is.

9/4 VK2s. 14/4: FO8DR beacon 2250Z 519 heard only. During April worked JA with beam peaking north-east. JA also hearing KH6 same way. 21/4. KX6QC. 11/5 and 16/5. Time signal, like WWV on 50.000 MHz signing "BPM" in CW at 1000Z. 23/6, 24/6 and 26/6 KH6FQ, W6HTH/KH6, KX6QC. 27/6 VK3.

20/8 KH6IAA. 24/8: JE3CYV/JDI Ogasawara Is. 2/9 W6HTH/KH6. 12/9 KH6IAA. 13/9 P29ZEV on 2m, VK9ZG Willis Is. on 6m. 17/9 and 18/9 T3AZ West Kiribeate. 19/9 P29ZEV 2m FM. 21/9 W6HTH/KH6. 27/9 KG6JDX. 28/9 W6HTH/KH6. Received report of being heard by 5W1AU (kept trying for this one for next few weeks but no contact) 30/9: KH6IAA.

1/10. KH6, again on 3/10. 4/10. 2100 to 2200Z MUF to 43 MHz to North America. 4/10: KH6. 11/10. Spanish R/T 43.4 MHz 2100Z. 15/10. KH6IAA. 17/10: W6HTH/KH6 0930Z "BPY" heard again on 50.000 at 0839Z. 24/10 KH6IAA 26/10 W6HTH/KH6. 27/10. P29ZEV 2m FM. W6HTH/KH6 0928Z.

1/11 VK9ZG 2m FM and 6m SSB. 3/11 VK9ZG 6/2 crossband. 11/11 K5CM 2215Z Oklahoma. KOGUV 2223Z Minnesota. VE4AS 2227Z Winnipeg. WAOCSL 2230Z North Dakota. KB9DN/VE4 2233Z (as per letter above). Also heard by W7WKR, K8EFS, N8AKY and WB2MAI (this one still to be confirmed). 17/11 ZL3, VK2, 3. 20/11 VK8GB. 21/11, 22/11: VK3, VK5. 29/11 KH6JSI CW/CW 50 to 52. Heard H44HIR beacon 50.006 2200Z 539. 30/11 H44PT 0246Z, 5 x 9 with H44HIR 419 in noise. FK8BG 0353Z CW/CW 539.

9/12: VK1 and 2, H44PT. 10/12 VK2. 13/12 VK1, 14/12 VK3. 22/12 VK2, 3, 5, 8. 24/12 VK5. 25/12 VK2, 3. 27/12 VK1, 2, 3, ZL1, 2. 28/12 ZL2, ZL4. VK2, 3, 8, H44, P29SIX (beacon). 20/12 VK2, 3, 5.

And that's the VK4RO story. Makes good reading doesn't it, and very mouth-watering too. But it also helps the operators further south to have someone in a good position like Russ because it keeps up the interest of the DX stations — if they never worked anyone whenever they looked this way, there would be very little hope for the less well situated stations because the overseas stations would soon tire at having so few contacts overall.

A LETTER FROM VK2

Noel VK2ZNS has written with some information on the good days of 28/12 and 29/12. He says that at 0900Z he tuned 6 metres looking at the various beacons and got the following results: **VK2WI S9+, VK3RGG S9, VK3OT S9+, VK4RTL S2-3, VK5KK S9, VK6RTW S1-2, VK7 — both beacons S9, ZL2VHM (52250) S3-4.** Tuning time approximately 2 minutes. Worked or heard VK1, 2, 3, 4, 5, 6, 7, heard VK9, ZL1, 2, 3, 4. JA4 and JA7 very weak.

Part of Noel's log for 29/12 included 0121Z VK5AVQ 5 x 9, /157Z VK8GF 5 x 3, 0241Z VK6BV 5 x 9, 0408Z VK6BE 5 x 9, 0433Z VK6AKT 5 x 5, VK6KZ 5 x 8, VK6HK 5 x 8, VK6ZZ 5 x 9, VK5 ZMP 5 x 9, VK8GB at 0645Z 5 x 3, and at 0947Z VK6ZDY 5 x 3. Many other VK3, 5, 7 worked. Notable contacts observed: VK6 to ZL1, 2. VK5 to ZL. VK8 to ZL. Many VK2 to ZL and all other States. Thanks, Noel.

CONDITIONS TOUGH FOR VK6

Tony VK6BV, in a letter received as I write this, outlines the frustrations of being able to hear beacons from the eastern states so often during the period up to Christmas 1980 yet not able to make any contacts with amateur stations. It wasn't for the want of trying, there didn't seem to be anyone around! He says it would appear people have stopped listening on the 6m band in preference to 28.885, and this is bad news for the Z call who cannot call on this frequency.

To indicate the generally poor situation for VK6 have a look at the following

3/12 0250Z VK3OT beacon, 0309Z VK5KK beacon 13/12 VK6ZH at Newman by Es. 0400Z VK5KK keyer 0530Z VK6ZCC Carnarvon by Es. 19/12 VK5KK, VK5VF and VK3OT beacons 0650Z VK5KK beacon. 0715Z VKVF 21/12: VK5KK beacon 0715Z VK5VF Worked only three stations VK5NW, VK5LP and VK5ZMP. 22/12 0830Z. Noted the following at this time but not necessarily when they came through. VK5VF VK5KK VK3OT, 46.250 TV video, 49.750 video and 51.750 TV audio Worked five VK5 stations. 25/12 0200Z Es to Newman, worked VK6YS 0225Z VK8GF 26/12 0730Z VK5KK beacon worked VK5ZRO. 27/12: VK5KK beacon, 0245Z VK3OT and VK3RGG beacons. 28/12 0830Z worked JA1, 2, 9 and 0. 0940Z end! 29/12 0200Z worked VK2 and 5 0225Z ZL2VHM beacon 0231Z ZL2CD 0317Z ZL1TF, ZL2KT then VK1 and 3. 0447Z ZL1TF 0700Z 49.750 video. 0850Z Can still hear VK6ZDY working VK2, but not here. 31/12: VK3OT and VK3RGG beacons at 0330Z

From the above most operators would consider conditions had been rather depressing to say the least Apart from 29/12, there was practically nothing to work. The above information may indicate to eastern stations just how fortunate they are, particularly those in VK3 who can have relatively easy contacts on 144, 432 and 1296 MHz when the going gets tough on 52 MHz!

R NEWS

Ron VK3AFW writes to advise **Gary VK3ZHP** was declared the winner of the 1980 two metre scramble series, narrowly defeating **Mavis VK3BIR.** Over 70 different SSB stations took part in the series with over 20 stations being present in any one scramble Only 144.150 to 144.180 is used by metropolitan stations within 100 km of GPO, and 144.180 to 144.200 being reserved for country stations **Graeme VK3ZSQ** at Shepparton was probably the most consistent country operator

Ron also reports what can be done with a 2 metre handbang if you care to get up on a high spot Using 2 watts to the whip antenna on 23/11 whilst at Mt. Buller Alpine Village, he was able to copy channel 7 repeater at Launceston, Geelong and Wangaratta simultaneously Channel 3 Wagga was worked and channel 7 Mt. Gimini copied A quick trip in the car to an area clear of trees enabled QSOs with **Reg VK3CCE/1** and **Theo VK1KV** through R7. Under average conditions from there repeaters 4 (Gippsland and Bendigo), 5 (Mt Macedon), 8 (Geelong and Wangaratta) can be worked hand-held

/S FROM G-LAND

Ted VK4YG has just arrived back from a holiday in "G"-land and advises that in the UK there are some 38 VHF two metre repeaters, 76 UHF (70 cm) repeaters with plans for some on 1.2 GHz. All require 1750 Hz tone access.

Australian amateurs intending to visit the UK or the continent should make reciprocal licensing arrangements at least **SIX MONTHS** in advance Those wishing to take hand-held or other amateur transceivers overseas should apply to their nearest Customs Office where a special stamp will be fixed to the equipment – this stamp enables the owner to bring the gear back without paying duty.

Actually the lack of tone burst on hand-held gear is not serious as you can wait until someone else "opens up" for you or perhaps you could carry a small 1750 Hz oscillator French, Dutch, German and Spanish amateurs could be heard working into "G" repeaters, and there was plenty of mobile activity.

The RSGB "RAYNET" organisation (same as our WICEN) relies on these repeaters since distances are small compared to ours, and the country is very well covered

Amateur transceivers and gear (Japanese, etc) over there are 5 per cent to 15 per cent more expensive (due to VAT) than in Australia, so you can forget about "shopping" whilst there. Thanks for writing, Ted

CALLING FREQUENCIES

I am grateful to **John VK5ZBU** for the following extract from "The West Coast VHFer" from the USA, dated December 1980, which is worthy of consideration by Australian amateurs

"Discussions held during the VUAC meeting at Colorado Springs determined that the National Calling Frequency should be 50.200 MHz. The International Calling Frequency remains at 50.110 MHz

"We recommend that if you are working Sporadic Es across the country, call on 50.200 and move up or down. Do NOT use 50.110 for U.S. Es work Leave it open for serious foreign DXing and calling. Local ragchews should be held above 50.150 or higher, during band openings Above all, if you have worked a particular state/country, don't move 5 kHz above him and talk locally or across country, thereby clobbering the rest of the guys who have never heard that station before, let alone worked him. They won't either until you move up the band Do so, and help your friends around you to get that station also. If you don't move, they will remember you for what you are. Don't make it tough on the other guy, by your unthinkingly bad operating habits."

It would seem the above is information to come at a very appropriate time, in view of the operating habits apparently observed on the 6 metre band on Friday, 2nd January, 1981, when the FK8s and other DX were coming through. Thankfully I was at work and was possibly saved from becoming embroiled in the far from satisfactory operating habits of some people, who waded in over the top of existing QSOs in an effort to make a contact. I am only able to comment at the moment on what happened in VK5 with VK5 operators, and I thank those people who have been in touch with me to outline the position as it apparently existed. I know also that unsatisfactory goings-on occurred in other States too but I lack first hand knowledge of this. **Perhaps the best comment I can make is that we could all learn much from the operating habits of the Japanese 6 metre stations who always have to work us from dog-pile situations, but when a contact is in progress they are thorough gentlemen, and give those in contact the privilege of silence whilst awaiting their turn.**

MIDWAY ISLAND OPERATION

John VK5ZBU also advises that N2KC/KH4, Tom, is in the US Navy on Midway Island and is planning a 6 metre operation in the near future His equipment is a Swan 250C and 5 element beam Listen on the 6m liaison frequency of 28.885 MHz for more information as to date and time.

CLOSURE

For most operators it seems 1980 ended and 1981 started very satisfactorily with many more contacts on the three main bands of 52, 144 and 432 MHz than was probably thought likely Possibly the greatest surprise has been the amount of Es around on 144 MHz with VK3 to VK2 and VK4, VK5 to VK6. Latest report to come in is that **Col VK3YII** has worked VK4 on 2 metres. So we have had a good start for 1981 may it continue

Thought for the month He who watches the clock will always be one of the hands.'

73 The Voice in the Hills

LATE ITEM

As this goes to press an excellent set of conditions has been prevailing between VK6 at Albany and VK5 and VK3, on 144 and 432 MHz, starting on 6/1/81 around 1100Z and still going strong at 1400Z 144 MHz has been worked between **VK6XY, VK6KJ, VK6WG, VK6AGT, VK6ZEL, VK6ZSP,** possibly others to VK5NY, **VK5CK, VK5NC, VK5LP, VK5ZDR, VK5RO, VK5TH, VK3ZBJ, VK3OT, VK3ZHP, VK3BHS, VK3AMH, VK3YII, VK3ATN, VK3TN, VK3YNB.** Most of these worked the VK6s as well as the VK5s. In addition VK6XY, VK6WG and VK6KJ had been on 432 MHz and worked **VK3ZBJ, VK3OT, VK3ATN** at least, possibly others. At the VK5LP establishment **Aub VK6XY** was workable on 432 MHz but he couldn't hear me Such is life! The above is a somewhat incomplete report but the best that can be mustered in the short time available. ■

AMATEUR RADIO IS A RESPONSIBLE SERVICE

LET'S KEEP IT THAT WAY

TRY THIS

WITH THE
TECHNICAL EDITORS

THE SLY BEAM (Suspended Long Yagi)
Design frequency 144.2 MHz, 32 elements, gain 21 dB, bandwidth 500 kHz. At 200 miles half power lobe is 35 miles wide. Construction materials, 1/8 in. aluminium rod or wire, 120 lb. plus breaking strain rope or cord, wood or plastic for spreaders.

The elements in my version were made from scraps of high tension overhead power line cable consisting of 7 strands of 1/8 in diameter wire which I untwisted and straightened. Aluminium welding rod can also be used. The 120 lb. breaking strain cord was prestretched before the elements were attached. The elements can be tied on using rotproof twine, or by using small rings cut from neoprene tubing. See Fig. 1.

The use of rings allows the element spacing to be adjusted more easily.

The matching method used was a delta match, and universal stub fed with coax and a half wavelength coax balun. See Fig. 2.

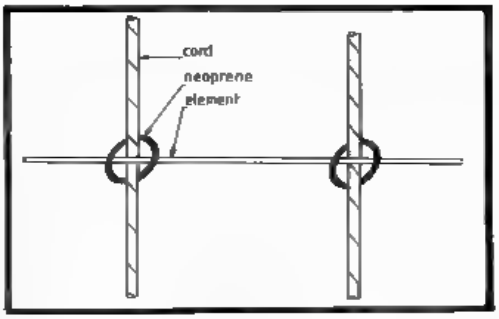


FIG. 1.

Not having an open wire feeder, I made mine using 16 gauge copper wire spaced 5/8 in. apart. Spacers were made from large plastic knitting needles, sawn to length and drilled.

Construction is easy. The biggest problem I encountered was in unravelling the cord. The beam can be rolled up for transport to a Field Day site. At present I use mine as a fixed beam pending the completion of a rotatable job.

Due to conditions I haven't yet tested the beam fully, but from reports of a test using the beam on Mt. Archer, near Rockhampton, I gather that a few eardrums were reverberating in Central Queensland.

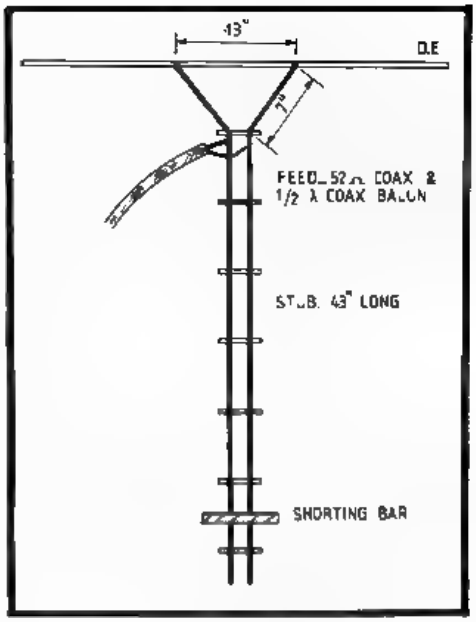
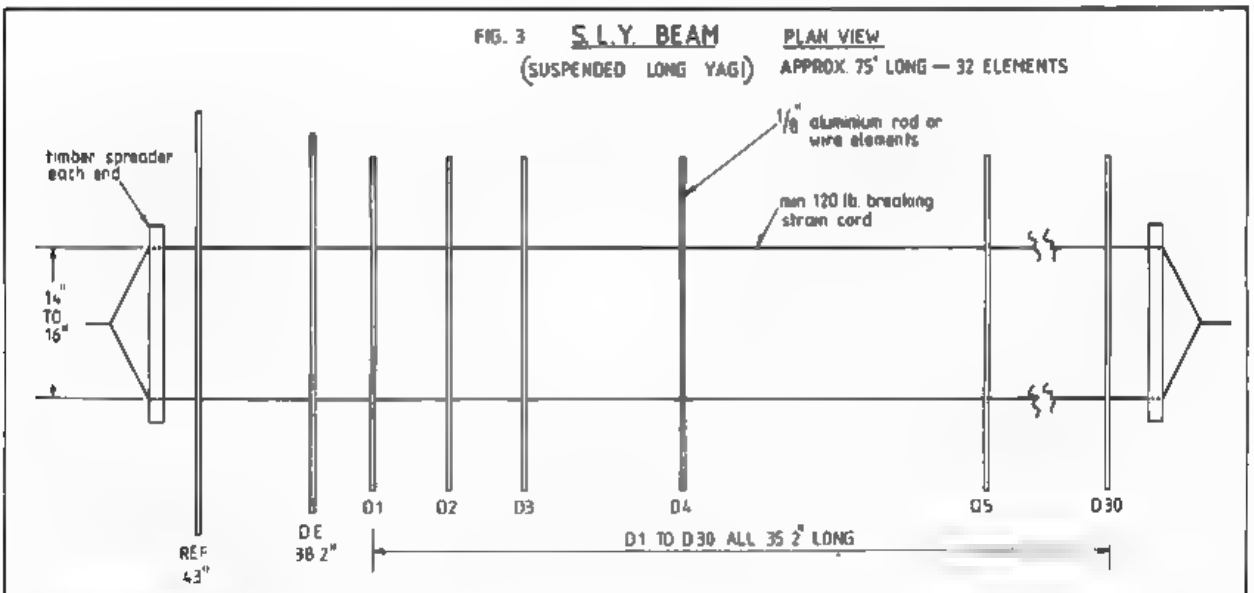


FIG. 2. Matching Method.

I tried my beam using 20, 25 and 30 elements, so constructors can make the antenna shorter if they wish.

Keith Lee VK4ALE (now Silent Key) ■



ELEMENT SPACINGS

REF	TO D.E	12" TO 20.5" (adjust for best F/B ratio)
D.E	TO D1	6.6"
D1	TO D2	7.4"
D2	TO D3	7.4"
D3	TO D4	16.4"
D4	TO D5	31.9"

REMAINDER OF DIRECTORS ALL 31.9" SPACING

LISTENING AROUND

With Joe VK2NIM

Well, here it is — the face that accompanies the voice that you might hear nattering away on 80 metres any night usually after midnight in cahoots with VK5LG Leo of Mount Gambier, VK5HM Gordon of Cowandilla, or scores of others including those who come up on VK3BSBs (Des, of Planesville, Vic.), Cocktail Net or the Southern Peninsula Radio Club Net, or with Rupert VK3BC of Sorrento.

Now, before I go on, thanks to all those who took the trouble to come on air and congratulate me on getting the full call at my third attempt (remember — if at first you don't succeed "try, try, try again" and you'll find the effort to be well worthwhile, as I have). It wasn't the CW that had me bogged down — the JAs and the Germans partially taught me that when I used to monitor the German DUB and the Japanese Domei newsagency during World War Two), but is was the theory that I had a mental block on. Anyway, I've got it now and I'm happy, even though I had a bit of strife negotiating with Melbourne and Sydney beaurocrats to get it

Have you ever noticed the very strange place names they have for some rivers and lakes in South Australia. Take for example Lake Poolyeruninna, and — this one takes the cake — Lake **Cadibarrawirracanna,** a relatively small lake a bit west of Coober Pedy. And while up that way, I might mention the old rail line (thats just been discontinued) between Port Augusta and The Alice which runs in part via Coward Springs to the south of Lake Eyre. (The new line runs from Tarcoola to the Alice.)

Those watching ABC television between 7 15 and 7.30 on Sunday night 7 December may have seen the documentary on the last trip of the old Ghan on the Port Augusta-Alice Springs section of that line. A Kalgoorlie amteur (Bill VK6ZX) had sought permission to operate rail mobile from that historic last passenger journey, but was refused. However, in the early hours of the same day that the TV documentary on the old Ghan was shown, VK5HM Gordon (of Cowandilla) and myself made contact with Bevan VK5TV who was northbound rail mobile aboard a goods train near Coward Springs. Bevan was using an FT7 with a vertical whip and we contacted him on 3585 kHz. A short time earlier VK5NNZ Ian of Prospect had told us to be on the lookout for Bevan who had been expected to come up on 3590.

Speaking with Bevan recalled some of my wartime experiences when I travelled on this same line to and from the Northern Territory, and when we stopped near what may very well have been Coward Springs — for I remember a place with a lot of rock pools — around which I photographed my army mates as they sipped mug-fulls of black coffee. The Ghan on which we travelled at that time was not even the civvy version that I saw on television, but a string of cattle trucks which were supposed to be good enough to serve as a troop train. I can't possibly imagine real live civilians travelling under the atrocious conditions that we — 600 of us — were forced to travel in then.

As Bevan's goods train ventured further north, his 3 by 3 signals at Burong dropped down into the noise, and neither Gordon nor I could copy him any more. This rail mobile trip was from the last goods train that would use this section of the line, so our contact with Bevan VK5TZ could have made amateur radio history. Bevan told us that the purpose of the trip was to bring back all the "stray" items of rolling stock that may have remained along that line, because once the line was torn up, they would have been there forever. Isn't it a pity that Bill Main VK6ZX of Kalgoorlie was not permitted to work rail mobile from the last passenger Ghan to use that old line? Aren't we fortunate to make amateur radio history by working the last goods train to use that line?

Now a few notes about the people I speak with. VK3DCF Kirk is a Kiwi from Dunedin (ZL4PX) who saw the light and has come to the Great South Land to find a job that he likes. VK6GD Bob of Merredin often pops up on 80 to have a word with us and it's always nice to hear him. VK6NPF Bart of Perth is another regular on 80. I met Bart first on 27 MHz a few years ago and was pleased to meet him again on an amateur band. VK3VRV Reg at Morwell was one of the many who congratulated me on attaining the full call. VK3VLE Joe at Rockbank has helped me building my two element quad (April AR) by sending me up marine plywood which I could not obtain locally. VK3VXJ Graeme from Sealake is a newcomer to the bands who isn't so far from me (so he naturally gets a good signal into Buronga). VK3VIR Lindsay from Doncaster is often heard, as is also VK3VTE Bill from Altona and VK3VLE another Joe from Murrumbeena. VK55GJ Leo at Mt. Gambier last night told us all about his wallpaper hanging problems (hope you got it up OK, Leo). VK3VEP Bob from Mildura had problems with a newly acquired oscilloscope which he has now got operation with valves and I was able to help out. And VK4KAG Angus is the first VK4K call that I have worked. Angus says the "K" bit is a new type of call sign, in which **Queensland leads the rest,** and which combines a Z call with a Novice call. VK3NOB David at Noble Park is heard regularly on 80. Other regulars include VK3VEJ Charlie of Tatyoon, Vic., VK3NDL Laurie, VK2PCL Helen, VK3VRO Harry at Rochester, VK3VXW Rowley at Mt. Eliza, K3VSD Ian at Noble Park, and of course my old sparring partner of the airwaves, VK3NTR of Ararat. These are but a few of the regulars to be heard on 80, that great rag chewing band. And I mustn't forget VK2NVI Alex at Lightning Ridge (where they live below ground) VK2VXH tractor mobile at Moree, VK2VXD Arthur of Balmain, and oh, so many more too numerous to mention this time.

A recent visitor to Mildura (where I worked him at Apex Park, about 3 air miles from here) was K3VPF Brian from Moe. Brian has toured all around Australia, and gave me much news of the Northern Territory where I was stationed in World War Two. We spoke about Mrs. Anaeas Gunn's book "We of The Never Never". Brian told me that the Elsee homestead at Mataranka mentioned in the book no longer exists but many of those characters of the book who lived at Elsee are buried in the homestead cemetery. I spoke of seeing TV shots of Pine Creek (where I was Army switchboard operator), and where the pub mentioned in "We of The Never Never" is located. When I saw that pub it was all barricaded up, but the recent TV shots of Pine Creek were made in the pub where Douglas Lockwood, recently deceased NT journalist, was interviewed by ABC-TV. And there on my screen also was the old railway station which we knew only in wartime as "the RTO's" office. Brian had seen much of the NT as it is today. I wonder if I shall ever have the chance to see it again?

I think that every ex-serv.ceman who served in the Northern Territory, one day would like to return there, for that is the way the place gets you. How nice it would be if I could take such a trip right now!

Well, you lot who might see my picture (if they print it) at the top of this column, might get a shock if you could see me here right now for its 8 January at Buronga and as the temperature is 39 Celsius, **I'm a-sittin' here in nuddy** with an air cooler blowing on me to keep the temperature down. Anyway, if you liked reading this, please let me know — and if you don't, also please let me know — for it would be nice to get some efedback either way from my efforts. A Happy New Year to you all. ■

NOVICE NOTES

Edited by Ron Cook VK3AFW

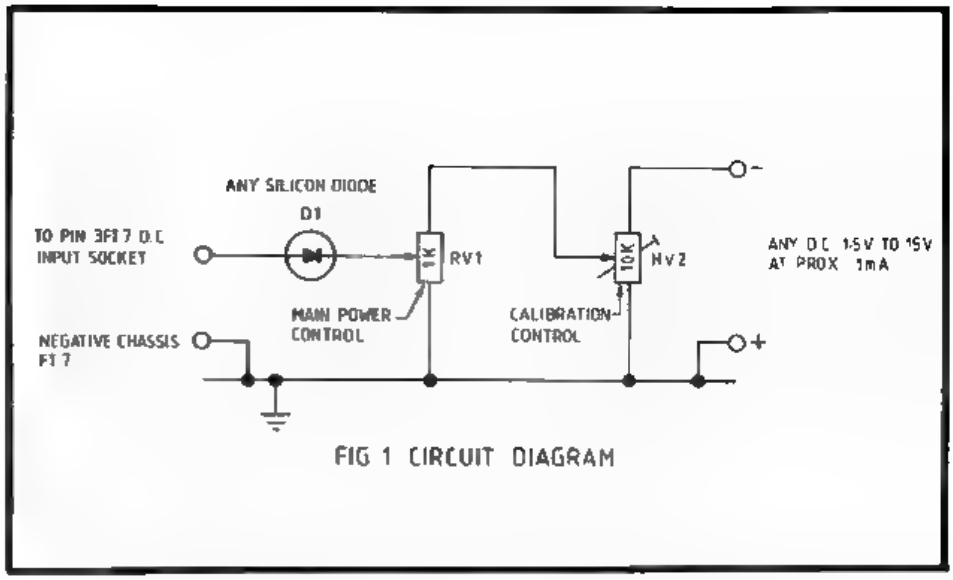


FIG 1 CIRCUIT DIAGRAM

RF POWER CONTROL FOR THE FT7 WITHOUT REMOVING THE COVERS

The circuit to be described has been successfully used by the author for some time and was developed to allow output power reduction from a maximum of 25W to zero for QRP operation, driving linears, and antenna testing at low power to reduce risk of damage to the RF PA transistors. It also allows the RF-derived ALC to be set to just operate on normal speech peaks instead of being used as a power output control.

The FT7 utilises a directional wattmeter circuit to sample RF output, which is then rectified by forward and reverse power diodes D1502, 1503 and 1504. The anodes of the diodes form an OR gate from which a negative voltage is derived, and fed back as ALC to Q304 in the transmitter IF chain to control its gain and hence RF output. The diode OR gate lends itself to the addition of another diode, and this is what is done.

An attraction of this modification is that the ALC is connected to pin 3 of the DC power socket on the rear apron of the FT7, and therefore it can be incorporated without removing the covers

Before commencing, connect a 50 ohm RF wattmeter to the FT7 antenna socket and transmit on 3.5 MHz, the output will probably be 15W. Adjust ALC potentiometer RV1501 through the rear apron to just secure maximum RF output; this should be 25W for a meter current of 3.8 to 4A at 13.5V. This is within the output transistor's ratings, but should not be sustained for more than 20s.

Switch to receive and prepare the circuit as shown in Fig 1. The negative supply may be derived from a mains unit, but a 1.5 to 15V dry battery will work just as well, as current drain is only about 1 mA. As the battery voltage begins to fall, the only effect will be that zero RF output will be unobtainable without readjusting RV2. Use an Avometer (high tension voltmeter — Ed.) on the 10V scale to adjust RV2 to obtain —1V across RV1. Connect D1 to to obtaint 1V across RV1. Connect D1 to the FT7 pin 3 and the positive battery line to the chassis.

Switch on the FT7 and transmit into the dummy load. RV1 should vary power output from maximum to zero watts. If zero is not achieved, adjust RV2 until cut-off is reached. RV2 can be a small preset, as it is seldom readjusted once set.

Note that RF efficiency drops with reduced power output, e.g. for a 2A meter current, 5W are produced; for 3A, 12-15W and for 4A, 25W, corresponding to efficiencies of 20, 45 and 50 per cent respectively.

— From Radio Communication, No. 3, 1980. ■

A NOTE ON VSWR

I have heard suggestions that the VSWR of a coaxial line feeding an antenna can be reduced by adjusting the transmitter matching or by using an antenna tuning unit (ATU). This is quite wrong.

If the transmitter has an adjustable pi network and the VSWR is less than 2 or 3 to 1, then it is usually possible to make adjustments so that the PA sees its correct load and delivers its rated power without distortion. The feedline's VSWR remains exactly as it was before.

Similarly with an ATU the VSWR of the line to the antenna will be unaffected although the line to the transceiver from the ATU will be affected. This is what an ATU is for — to present a true 50 ohm load to the transceiver regardless of the VSWR on the antenna feedline.

I have also heard it said that an ATU is an evil box used to counteract an evil condition — high VSWR. It certainly is more convenient if the antenna can be resonated and then matched to the feedline. Sometimes we can only resonate the antenna and sometimes we cannot even do that. In either case the ATU will save our bacon and let us put out a good signal instead of no signal at all

I have received an interesting article from David VK3NOB, in which he describes a triband wire antenna. It will appear shortly.

73 VK3AFW. ■

RADIO AMATEURS OLD TIMERS' CLUB ANNUAL DINNER

The annual dinner of the RAOTC will be held on Thursday evening, 5th March, 1981, in the Ciunles Ross Science Centre, 191 Royal Parade, Parkville, Melbourne, commencing with pre-dinner drinks at 6.30 p.m. Members will receive a "Dinner Application" form in due course advising the cost per head, together with a Newsletter

Membership is open to any licensed amateur who has held his licence for 25 years or more. The initial cost of $5 (which includes a certificate and badge) is the only cost for life membership unless when attending the annual dinner, when an overhead cost applies.

At the 1981 dinner the First Assistant Secretary (or one of his officers) of the Satellite Policy and Co-ordination Division, Department of Communications, Canberra, will be delivering an Illuminated address on the proposed national satellite system This should be of great interest to amateurs and interstate members in particular will be most welcome.

Any amateur who qualifies for membership may obtain full details from Harry Cliff VK3HC, UO Box 50, Point Lonsdale, Vic. 3225. ■

REMINDER

28.200 to 28.300 MHz is the International Beacon segment. Please avoid operating in this segment, otherwise observers may be unable to hear and identify overseas and other beacons on frequency.

Five-Year Index of Technical Articles

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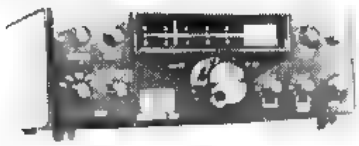

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- ★ HF Mobile Whips
- ★ Speech Processors
- ★ Antenna Springs
- ★ Morse Keys and Keyers
- ★ 2M Mobile Antennas
- ★ Pitchfork Antenna
- ★ Stainless Steel Bumper Mounts
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- ★ Roof Bar/Mirror mounts

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COMING FIELD DAYS

Central Coast Amateur Radio Club 22nd February 1981 Details from P.O. BOX 238, Gosford, NSW 2250

Liverpool and District Amateur Radio Club 22nd March 1981 Details from 105 Willan Drive, Cartwright NSW 2168

SCALAR Communication Products

NSW: 328 Kingsgrove Rd., Kingsgrove 2208. Tel. 502 2888 Telex AA27087
VIC. 20 Shelley Ave, Kilsyth 3137 Tel. 725 9677 Telex AA34341
QLD: 8 Ferry Rd., West End, Qld. 4101 Tel. 44 8024 Telex AA43007
W.A.: 5/319 Pearson St., Osborne Park 6017 Tel. 446 4657 Telex AA94825

CONTESTS

Wally Watkins VK2DEW
Box 1065, Orange 2800

February

7/8	John Moyle Memorial	AR 1/81
7/8	RSGB 7 MHz Phone	CQ 2/81
14/15	Dutch "PACC"	CQ 2/81
21/22	ARRL CW DX	CQ 2/81
27/1 Mar.	CQ WW 160m Phone	CQ 1/81
28/1 Mar	RSGB 7 MHz CW	CQ 2/81
28/1 Mar.	G-QRP CW Activity	CQ 2/81

March

7/8	ARRL Phone DX	CQ 2/81
14/15	Commonwealth CW	FCM
21/22	Commonwealth Phone	FCM
21/22	BARTG RTTY	VK2SG
28/29	CQ WW WPX SSB	

April

4/5	Polish CW	FCM
18/19	Polish Phone	FCM
25/26	King of Spain Contest	FCM
25/26	Helvetia Contest CW/Phone	FCM

EXCHANGES

RSGB 7 MHz, RS(T) plus QSO No. starting at))+ 001.

Dutch PACC, RS(T) plus QSO No. starting at 001.

ARRL DX, RS(T) and power (3 digit number).

G-QRP, RST.

COMMONWEALTH CONTESTS

Logs to —

For CW Section: D. J. Andrews G3MXJ, 18 Downsview Cr., Uckfield, East Sussex, TN22 1UB, England.

For Phone Section: CARF Contests and Awards Committee, Box 2172, Station D, Ottawa, Ontario, KIP 5W4, Canada

The references after the listed contests give the magazine in which the full rules can be found. FCM — send a SASE for copy.

Exchanges will be listed each month so that if you get caught up in a contest you will know what is going on. ■

COMMONWEALTH CONTEST 1981 — "BERU" RULES

TIME

1200 GMT Saturday, 14th March to 1200 GMT Sunday, 15th March

MODE

CW only, 3.5 to 28 MHz. Call is CQ BERU

Eligible entrants are radio amateurs licensed to operate in British Commonwealth call areas as listed below.

SCORING

5 points per contact exchange (RST 001 etc.), 20 points for 1st, 2nd and 3rd contact with each call area other than one's own, on each band.

G, GW, GD etc. are counted as one area. Contacts with one's own area do not count at all. Penalties are imposed for unmarked duplicate contacts, incorrect calls and reports.

LOGS

Separate logs are required for each band showing columns:—

1. Date and time GMT.
2. Station worked.
3. NR sent.
4. NR received
5. Band.
6. Leave blank (for checking).
7. Contact points claimed
8. Bonus points claimed.

Each band log should be separately totalled and should include at the end a check list showing areas worked and number of contacts per area. Separate band totals should be added together and the total claimed score entered on a cover sheet giving particulars of station, QTH, equipment, power, antenna, and a declaration that the rules and spirit of the contest have been observed.

Entries may be single or multiple band. Single band entries should claim contacts on one band only, but submit details of contacts on other bands for checking only.

Entries should be addressed by AIR MAIL to:

D. J. Andrews G3MXJ,
18 Downsview Crescent, Uckfield,
East Sussex, England, TN22 1UB.
Closing date: 12th May, 1981.

COMMONWEALTH CALL AREAS

The following call areas are recognised for the purposes of scoring in the 1980 Commonwealth Contest.

A2 Botswana, A3 Tonga Is., A5 Bhutan, C2 Nauru, C5 Gambia, C6 Bahamas. G/GB/GD/GI/GJ/GM/GU/GW. H4 Solomon Is. J3 Grenada, J6 St. Lucia, J7 Dominica. P2 Papua New Guinea. S2 Bangladesh, S7 Seychelles. T2 Tuvalu, T3 Kiribati.

VE1, VE2, VE3, VE4, VE5, VE6, VE7, VE8, VK1, VK2, VK2 Lord Howe Is., VK3, VK4, VK5, VK6, VK7, VK8, VK9 Christmas Is., VK9 Cocos Is., VK9 Norfolk Is., VK9 Willis Is., VK0 Heard Is., VK0 Macquarie Is., VK0/VP8 Antarctic, V0, VP1, VP2A, Antigua Barbuda, VP2E Anguilla, VP2K St. Kitts Nevis, VP2M, Montserrat, VP2S St. Vincent, VP2V British Virgin Is., VP5 Turks & Caicos, VP8 Falkland Is., VP8 S. Georgia, VP8 S. Orkney Is., VP8 S. Sandwich Is., VP8 S. Shetland Is., VP9, VQ9 Chagos, VR1 British Phoenix Is., VR6, VS5, VS6, VX9 Sable Is., VY1 Yukon, VYO St. Paul Is., VU India, VU Laccadive Is., VU Andaman & Nicobar Is.

YJ.

ZB2, ZC4/5B4, ZD7, ZD8, ZD9, ZE, ZF, ZK1 Cook Is., ZK1 Manihiki, ZK2 Nuie, ZL1, ZL2, ZL3, ZL4, ZL Auckland and Campbell Is., ZL Chatham Is., ZL Kermadec Is., ZM7.

3B6/3B7 Agalega and St. Brandon, 3B8 Mauritius, 3B9 Rodriguez Is., 3D2 Fiji, 3D6 Swaziland

4S7.

5H3, 5N2, 5W Samoa, 5X5, 5Z4.

6Y5.

7P8, 7Q7

8P, 8R.

9G1, 9H Maltese Is., 9J2, 9L1, 9M2 W Malaysia, 9M6/9M8 E. Malaysia. 9V1, 9Y4.

*All calls operated from Commonwealth controlled areas of the Antarctic (VK0, VP8, ZL5 etc.) count as one call area

AUSTRALIAN AWARDS

For some years, two medallions have been awarded, a silver one for the top scoring VK, and a bronze one for that station filling the middle placing among the total VK entries

As an experiment aimed at getting a wider spread of entrants from the various Australian call areas so that last year's entry of 43 can be improved upon, this year there will be:

1. An individual award to the highest VK scorer — a gold medallion.
2. A state team award — 4 silver medallions to the state team of 4 which achieves the highest aggregate score. If the "individual" winner is a member of this team, he will receive the gold medallion instead of the silver one
3. An award, as before, to the middle placing among VK entrants, i.e. to say, the 22nd placing among 43 or 44 entrants.

Results of the 1980 contest appeared in Amateur Radio of November 1980. ■

QSL CARDS FOR VK9/0

This is a note directed to operators who work a VK9 or VK0 for the first time and intend sending a QSL card through the Federal QSL Bureau. Due to some difficulty in keeping up with these areas if, when you make out the card could you give the VK9/0 location. It will assist my sorting and also help to pin down illegal operations. I would point out here that there appears to be quite a lot of this activity. I fail to believe that all the cards I receive for VK9 and VK0 (that I cannot find an operator for) have call signs on the cards that the operator did not hear

I will try and have a list published of call signs for the VK9 and VK0 area for which I cannot find a legal owner

Neil Penfold VK6NE,
VK9/0 Federal QSL Manager ■

SPOTLIGHT ON SWLing

Robin Hawood VK7RH
5 Helen St., Launceston, Tasmania 7250

You will probably have heard of a new magazine simply entitled 'Voices". This publication on short-wave broadcasting comes from Finland and is devoted exclusively to programming. It aims to present details of programmes to be broadcast by the various international stations during the month of issue, in short, a programme guide. It is not geared for DXers but for the ordinary short-wave listener. Unfortunately, it has had teething troubles since it first appeared in July 1980, and they still seem to be having problems, judging by their January 1981 issue. The airmail subscription rate is

approximately $A20.00 or 70 Finnish marks. Their address is PO Box 226, Helsinki 17 Finland.

Yet another DX programme is being modified, this time it is Radio Nederland's popular "DX Jukebox". From July, it will be changed into an Electronic Media Review type magazine. The DX portions will be gradually phased out over the next few months leading up to the change-over. After the BBC World Radio Club was concluded late last year, the BBC was deluged with protests on the closure of this popular programme. One result of the protests has been that they have included a weekly five minute segment called "Waveguide" as an aid to BBC World Service listeners with reception problems. The best time to listen to it here in Australia would be at the 2155 GMT release on the W/S outlet at this hour.

One way to keep up with the news of HF propagation as well as the latest amateur DX happenings is to listen daily on 14090 kHz C/W at 2200 GMT for W1AW. This station is at the ARRL headquarters in Newington, Conn., and also operates on 7090, 21090 and 28090 kHz transmitting bulletins of information for amateurs several times a day. The C/W sked at 2200 is sent at approximately 19 w.p.m. but they also send at other speeds at other times. They transmit a RTTY copy of these bulletins on these channels at times also.

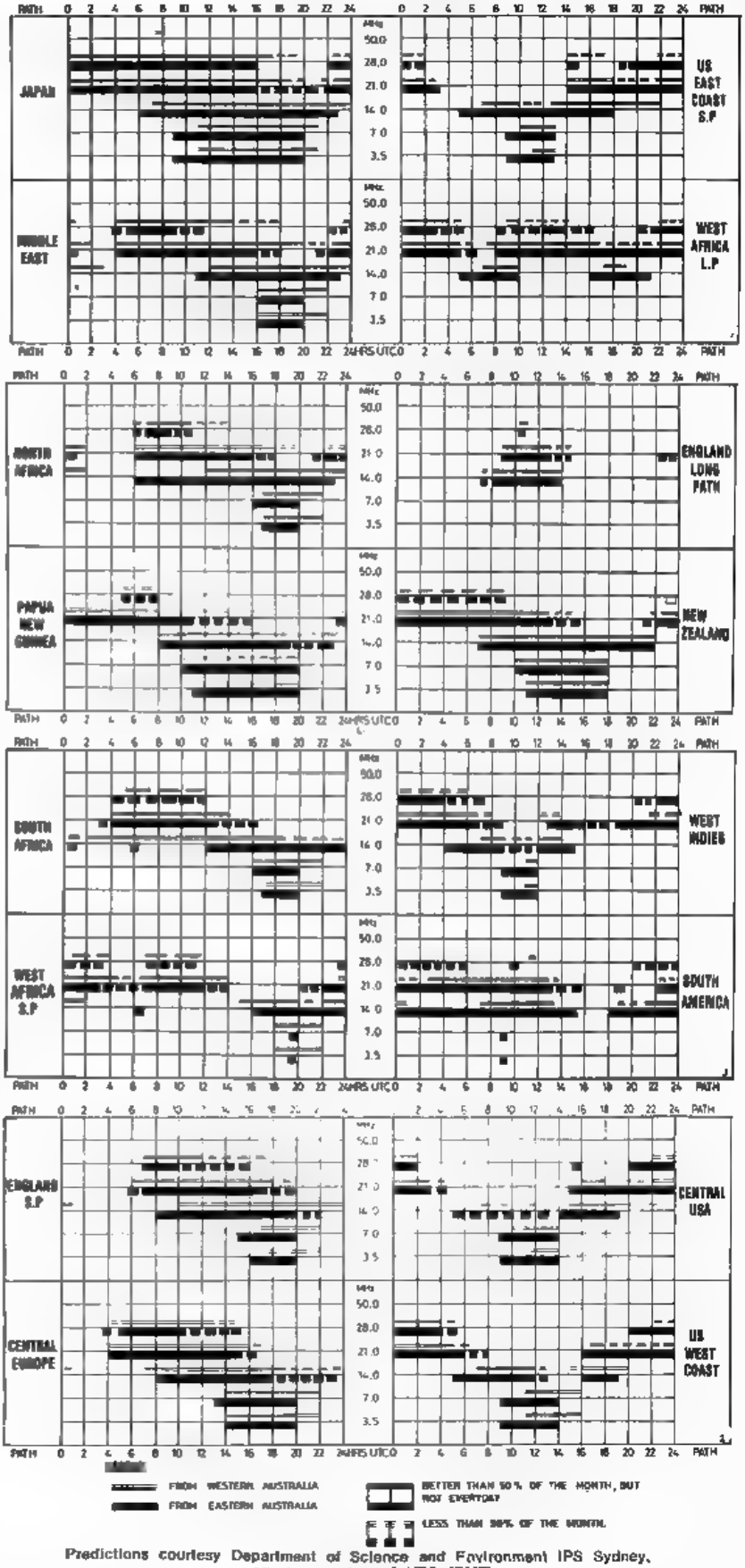
There is also a weekly net for amateurs and SWL DXers to exchange tips and news of loggings. It is scheduled for 0900 Wednesdays on 3565 kHz and is conducted by members of the Australian Radio DX Club. Net control is either VK3BVW or VK1DN.

It is pleasing to hear that, under the new frequency plan proposed by the Department of Communications, the 40 metre amateur allocation is to be increased to 7.3 MHz in line with the American allocations. This is to be on the basis of non-interference. Now the only clarification is what the criteria will be in judging whether a station on a particular frequency is aiming its signal for Australian audiences or to another region. I suspect somehow that it will not make much difference, due to the crowded nature of the 42 metre broadcasting band in the evening hours, although I am still at a loss as to why they did not increase the 80 metre allocation to 3.8 MHz. That allocation would have made more sense than the extra 200 kHz on 40 metres, in my opinion.

Unfortunately, due to time commitments, I am unable to present the information on collating band charts. Hopefully, it will be in next month's column. Until then, the best of DXing and 73. ■

IONOSPHERIC PREDICTIONS

Len Poynter VK3BYE



Predictions courtesy Department of Science and Environment IPS Sydney.
All times universal UTC (GMT).

HEARD ANY GOOD "RUMOURS" LATELY?
TELL A.R. ABOUT THEM

AWARDS COLUMN

Bill Verrall VK5WV
7 Lilac Avenue, Flinders Park, SA 5025

PIONEER SHIRE CENTENARY AWARD

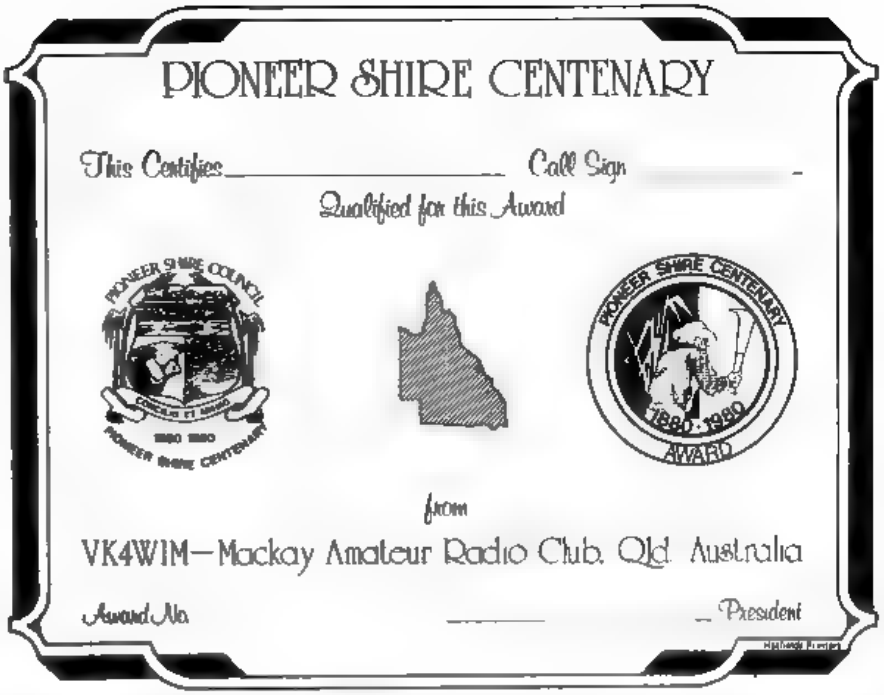
The Mackay Amateur Radio Club, Queensland, offers this award to all amateurs and SWLs for working/hearing Club members. This award is available during the Pioneer Shire Centenary year, which commenced on 1st July, 1980.

RULES

1. Work the Club station VK4WIM plus four separate Club members; or
2. Work eight separate Club members stations; or
3. Work four separate Club member stations on CW
4. Contacts may be made on any authorised mode, any band, but CW QSOs count double as in 3.
5. Claims for the award shall be in the form of a full log extract signed by two other licensed amateurs or a JP, showing the stations worked. QSL cards are not required.
6. SWLs may claim for the award as in 5.
7. The cost is $2.00 or equivalent in IRCs.
8. Applications should be forwarded to the Awards Manager, Mackay Amateur Radio Club, PO Box 1069, Mackay, Qld. 4740.

DESCRIPTION

The award is a multi-coloured print measuring 280 mm x 200 mm.



BRISBANE AMATEUR RADIO CLUB AWARD

The Brisbane Amateur Radio Club will issue this award to all amateurs and SWLs for working/hearing Club members in accordance with the following rules:

1. Work the Club station VK4BA plus four other Club members and obtain their Club number; or
2. Work any seven members of the Club and obtain their Club number.
3. Contacts may be made on any band, any authorised mode.
4. Claims shall be in the form of a full log extract showing the stations worked and Club members.
5. SWLs may claim for the award as in 4
6. The cost is $1.00 or equivalent in IRCs.
7. Applications should be forwarded to the Awards Manager, Brisbane Amateur Radio Club, PO Box 310, Mt Gravatt, Qld. 4076.
8. The Club holds a net each Monday at 0630Z on 28.450 MHz. Members may be found also on 21.175 MHz following the WIA news broadcast at 2300Z on Saturdays (Sunday local time).

DESCRIPTION

This award features an overhead photograph of Brisbane in green with the river in the foreground and all printing in black. The award measures 240 mm x 185 mm.

Good hunting. ■

QSL

NEW 10 MHz BAND

According to IARU R1 News October 1980 the ARRL Board directed the filing of a petition to FCC requesting that the new 10 MHz band be made available to General, Advanced and Extra Class licensee for CW and RTTY operation only, with an input power limit of 250W. Two Canadian amateurs, VK3OO and VE3DFB, are stated as awaiting special one year VE9 licences in the experimental service to operate low bit rate digital communications anywhere in the 10.1 to 10.15 MHz future amateur band with an output power limit of 5W. The Philippines Administration is stated to have agreed to release the 10.1-10.15 MHz band to Filipino amateurs on 1-1-1982 ■

50 YEARS AGO

"Experiments conducted in Holland and Norway seem to indicate that wireless signals may go up into space for 1,000,000 or 2,000,000 miles, and be reflected back by a phenomenon similar to that which causes the aurora lights," said Mr. D. F. Martyn in an address on the "Possibility of wireless communication with Mars" To send signals to Mars it would be necessary to use a wave length of considerably less than 100 metres, for longer waves would be reflected back to earth. It could be assumed that the wave length used for commercial wireless on Mars was not less than 1000 metres. The chance of messages from earth being received by casual listeners on Mars was therefore very remote.

From the Ballarat Courier May 17, 1930. ■

VICTORIAN DIVISION EASTERN ZONE

CONVENTION

14th AND 15th MARCH 1981

PLACE

Gippsland Educational Tours Hostel at Moondarah Reservoir, 20 kms north of Moe

PROGRAMME

Amateur radio activities, competitions, displays, lectures. Bush strolling and swimming

ADMINISTRATION AND INFORMATION

Sue McDonald VK3NW, Grande Ridge Road, Carrajung 3844. Ph. (051) 94 2284.

Pre-school children are free. Overnighters need supply sheets and pillows sleeps only ■

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

PO Box 110,
Blackburn Victoria 3130
22nd November, 1980

The Editor
Dear Sir,

In recent months readers of the "Letters " colum of AR have witnessed many expressions and exchanges of opinion. We may thank the Editor for providing this forum. I should like to add my own views.

Lest I be drawn into a fray, may I state that am not a WIA member, although I am an ARRL member and my wife and I exchange our respective WIA and ARRL publications. I am not a trained engineer by qualification, nor am I a professional communicator. I received my first amateur licence in 1962 (WV2RRV) and have followed articles in the amateur publications with varying degrees of comprehension since approximately that time. I was largely inactive until 1977 when the call 'VK0AC" was issued to me and subsequently my present licence. My undergraduate and post-graduate degrees are not in engineering but are in teaching-related fields.

Many amateurs probably share my distress at a most recent exchange between Messrs Bies and Yates (AR. of 1980 June page 36, September, pp 36-37 and November, page 32) and between other individuals, as well, because these exchanges have highlighted a basic tenet of amateur radio. That is that we are primarily hobbyist communicators and experimenters (priorities may be reversed?) who are licensed because of the potential we have for creating chaos in the RF spectrum if we operate with insufficient knowledge. We are fortunate to have amongst our "hobbyist" ranks some extremely proficient technical people, chartered and professional engineers, and world renowned scholars.

Our 'journals" are not professional journals nor would my ARRL or my wife's WIA memberships count either of us as members of a "learned society". In spite of this, our journals provide us with a great deal of technically accurate information to enrich our hobby. In the past 15-20 years of reading (with varying degrees of comprehension) QST and, more recently, AR, I have sometimes come across information which appeared to be more 'folklore' than accurate. I hasten to add that the editorial standards of AR and QST appear to be considerably higher than some of the 'competing' commercial publications. (I am thinking as much of overseas publications as I am of domestic ones.)

Whereas a little bit of "folklore' may be seen in our journals, one often witnesses the exchanges of 'folklore' on the amateur bands. (I refer not solely to the '5 x 9+' reports I received while VK0AC.) One need not be knowledgeable in spread-spectrum communications to express one's views on the "woodpecker" nor does one have to perform a great deal of mathematical manipulation to 'experience" the woodpecker. I don't understand a great deal about this phenomenon of the past 3-4 years although I hope that my past Intruder Watch reports were not wasted effort. I doubt if most 2m proponents would consult a table of Bessel functions before the operation of the "push to talk" on their favourite equipment.

The above is to say that we may experience a great deal of the wonders of wireless communications without having to delve deeply into the theory of what makes it work.

Those in our midst with academic backgrounds and the patience to help raise the standard of the hobby which we enjoy have a strong contribution to make. Those with a technical or non-academic background can often make equally great contributions. Each should recognize the other's competence and, perhaps more importantly, his own areas of inexperience.

Perhaps a minor criticism of our journals could be made that the inclusion of references is an all-too-rare practice. When I read an article in a professional journal and see a controversial statement or questionable citation, the reference or footnote encourages me to do further reading before dismissing or accepting the statement.

The information of C. Yates in the June AR appears to this reader to be accurate. I am sure that any other individual with Mr. Yates' experience would be able to provide similar information without recourse to a pile of textbooks, but perhaps the inclusion of pertinent references should be a more common practice in AR's articles and letters. It would be a valuable service and, in this instance, had Mr Yates substantiated some of his information with pertinent references, both Mr Bies and I would have derived even greater educational value from the June AR letter. Pertinent references in the letter of Mr Bies would also have been useful. The apparent accuracy of the suggestions in the June letter, made more difficult to substantiate by the lack of references, could have been more effectively rebutted if Mr. Bies had cited his own reference sources in concluding "the man is completely wrong" (1). If unable to substantiate his statement with a supporting reference, a more measured reply might have been prefaced with "In my albeit limited knowledge, I hold the view that . " Where heated discussion may be a likely consequence of a publication, it might be a service if the Editor could request that writers supply their sources used.

Mr Yates says that he has cancelled his amateur licence. I hope that he has preserved his AOCP and will rejoin our ranks for it would appear that he may have much to offer to myself and other hobbyists. I am sure that others share my own desire to learn more about our hobby and share my own belief that both Messrs. Bies and Yates have talents to offer. I have much to learn about this one of my hobbies and I sometimes hear what seems to my thinking to be more folklore than fact.

If writers in AR could follow a couple of guidelines it could raise the standard of the publication and improve the educational value of their work. We need to recall what the "A" of AOCP stands for and be careful to assist readers in separating fact and opinion. In the latter regard, references to the established literature are most useful and have great educational value.

I have a great deal to learn about my hobby and I hope that the Editor and the writers whose work appears in AR will continue to contribute to my education.

Respectfully yours,
Art Coolidge VK3AOK, AOCP

REFERENCES

(1) A. Bies, "Letters to the Editor", **Amateur Radio**, Vol. 48, No. 9, p. 36, September 1980. ■

73 Gray Street, Kogarah, NSW 2217
12th November, 1980

The Editor,
Dear Sir,

I would like to comment on a letter signed by Mr Colin Yates in the November issue of AR.

Mr Yates, in his attack on Mr A. Bies, implied that if an amateur performs some useful task to the Institute then he should be given special dispensation in regard to the need to operate his equipment in accordance with the terms of his licence. He also implies that, because of such "service", he should be immune from criticism if he does break the rules.

I do not believe that such views are acceptable to the majority of the amateur population. Certainly they are not acceptable to me.

Whilst people who do useful work on behalf of the Institute are to be applauded if their work is useful and not misguided, they must not expect favoured treatment in regard to the rules which are designed to protect the amateur population in general.

Yours faithfully,
C. E. Fredrickson VK2EC. ■

Both sides have now had a go, no further correspondence will be published on this subject. —Ed.

The Editor,
Dear Sir,

I thought 3NT was a bit unfair in his AR letter (November issue) on the review of the IC2A. I think that the reviewer does a good job and 3NT should remember that when food reviewers comment on a restaurant they tell it the way they see it and the reader makes up his mind.

I don't see why Vicom should be allowed to edit a review prior to publication, but I think it fair to publish any communication from the equipment manufacturer (or Aust. rep.) if the review is incorrect in any part.

R. N. Torrington VK3TZ
4 Thistle Street, Pascoe Vale South
12/11/80 ■

PO Box 868, Albany 6330, Western Australia

The Editor,
Dear Sir,

I have an old mantle model G64ME Holpoint Bandmaster 00012506, 19510 radio. Would you be able to find me a schematic on the circuit? Who should I write to?

Yours sincerely,
A. A. Paton.

Can any reader help?—Ed. ■

HELP WITH INTRUDER WATCHING

22 Ruskey Avenue, Royal Park, SA 5014
16th December, 1980

The Editor
Dear Sir,

Firstly, I would like to express my appreciation to the Federal Awards Manager, Bill Verrall VK5WV, for his efforts in the Awards Column of Amateur Radio. Each month when the latest issue of the magazine arrives, it is the awards column which gets my first attention.

In the December 1980 issue the Awards Manager mentions some of the WIA awards and his disappointment in the number of applications he receives. He then goes on to make some comments on QSL cards. Here, I think, he has hit the nail right on the head. One of the biggest problems with WIA awards is the requirement for QSL cards. Since I am interested in the VHFCC I have sent out over three hundred cards for six metres contacts during my nine years on that band. So far I have not received enough back to apply for the award.

I realise that many people with limited or novice licences do not wish to go to the expense of having cards printed, which may not be all used by the time they graduate to a higher licence. But there are alternatives. For instance cards could be obtained without call signs and a stencil used until the new call sign is obtained, any left being then printed with the new call sign, or a new stencil made.

Alternatively a card could be typed out, tedious but better than nothing, or a simple photostat copy, even if only on paper. If all else fails why not at least write a letter of confirmation? As long as it contains all the right information it should be acceptable.

The only other way to increase applications would be to drop the requirement for QSL cards, and accept a certified log extract, as do many other award committees. Even if this easing of rules could only be applied to WIA members it would be a help. There seems to be an inconsistency in that for Federal awards QSLs are required, yet for Divisional awards (e.g. VK7, Devil Award, VK6, Zone 29 Award etc.) they are not.

Anyway, as soon as I get enough cards together my application will be forthcoming, so at least there is one interested person out there.

Yours faithfully,
R. W. Pilcher VK5AN (ex VK5ZGZ) ■

98 Canterbury Road, Canterbury, Vic 3126
Phone: 836 0707
8th December, 1980

The Editor,
Dear Sir,
I wish to register a "mild" complaint regarding the QSP article on the construction of a morse code key in the November issue of Amateur Radio, page 6.

This company has been advertising a British pattern morse code key for two years or so in Amateur Radio magazine and has now sold over 800 of them, sufficient proof that the key is of a high standard.

The article by Mr Nick Rozakeas is obviously well meant but its context infers that **ALL** keys on the market combine identical design and none of them are any good for one reason or another.

The illustration in my issue is not overly clear but what can be observed seems far removed from the results of a good engineer insofar as it appears to include bits and pieces which seemingly might have come from hose fittings to headphone plugs! Its basic concept (the arm and fulcrum) is nothing more than a copy of the American principle which would be hard-pressed to compete with the British system in the matter of "balance" — a point your engineering scribe omits to consider.

I say again that my complaint is a "mild" one because I have some doubts that Mr Rozakeas will compete too heavily with the advertisers in your magazine; but what I do think is that the editors should perhaps be a little more circumspect in publishing comments by article writers which, in a manner of speaking, gives readers the wrong impression and infers that the goods are inferior.

Only "heavy fisted" operators require a heavy key base (designed originally I suggest for use aboard ship) but, in any case, all keys are provided with holes for screwing the key down to an operating table if required.

Yours faithfully,
G Maxwell Hull, Manager. ■

211 Hopetoun Avenue, Vaucluse 2030,
NSW, Australia
337 6325
24/11/1980

The Editor,
Dear Sir,
A VK-ZL Chapter of the Royal Signals Amateur Radio Society has now been formed and we would like to hear from eligible people of either sex who wish to join.

Conditions for acceptance as members are that you must be one of the following:—

1. A serving member of the Royal Corps of Signals.
2. Associate membership may be granted to any member of the British Army, any member serving or retired members of a Commonwealth Signal Corps. A member of any branch of the Commonwealth Army in a Signals Section.

Nets are held as under:—
Daily 21.170 at 12.00 GMT For overseas and local members.
Every Wednesday 3.605 at 10.00 GMT For VK/ZL members.
Every Saturday 28.450 at 23.00 GMT For VK/ZL/VE members.

Senior Citizens and others in receipt of a disability pension will be entitled to reduced rates.

As and from December 1st, 1980, the VK-ZL Chapter of the RSARS will be issuing awards which can only be claimed by members of the RSARS. It is also envisaged that early in 1981 we shall have a Club Station.

If prospective members have any queries as to their eligibility or wish to join, then please contact the writer enclosing a 30 cent stamp to cover the cost of posting a magazine. The postal address is Box 402, Double Bay, Sydney 2028. I can be contacted on the telephone at (02) 337 6325 at all times.

Yours faithfully,
Les Simons VK2NLE,
Secretary, Royal Signals Amateur Radio Society (VK-ZL) Chapter ■

181 Punchbowl Road, Launceston, Tas. 7250
November 26th, 1980

The Editor,
Dear Sir,
Congratulations to the VK5 Division for another RD Contest win, but how did they do it? It wasn't the participation or the support as stated. VK7 didn't rate a mention but the result table shows us with the highest full call participation and a higher average score than VK5.

Some years ago I pointed out in this column that by a previous method of calculating, the Trophy score was in error in that the final result was in proportion to the number of licences. The previous Contest Manager changed the formulae and we saw the smallest Division (VK1) break the VK5 stranglehold and win in 1978.

The new Contest Manager saw fit to make quite a number of changes to the rules, including the Trophy points calculation. His apparent aim was to have as a bonus the points scored by other than full calls, and only calculate participation of full calls. This change brought us back to the final result being proportional to the population of the Division. To prove the point divide the relevant figures of the VK5 results by three and re-calculate the Trophy score. You will end up with a figure of about half of VK7's score.

While I'll agree that the smaller states have proved they can muster the numbers the present bias against us is just too much. Would I suggest the basis of new formulae could be total score divided by the number of full calls.

I see that Wally's term is due to expire in June. It seems a pity now that he obviously has his system tuned to a fine pitch. The quick result this year was proof of that. I also suggest that with the changeover to a new Contest Manager the rules of Contests be left to a committee appointed by Federal Council. Federal Council has declared that it is unable to deal with contest rules at Federal Convention time but passing the buck to one man is just asking too much of him.

I repeat, VK5 won the 1980 RD Contest not due to participation, not due to support from members, but just by the higher number of logs possible from a higher population than VK7.

Yours faithfully,
Peter Frith VK7PF. ■

9 McRae Place, Burnie, Tasmania 7320
19/11/80

The Editor,
Dear Sir,
Through your magazine I wish to reach two groups in Perth (WA). Last year I applied to the Perth Radio League for their WAY 79 Award. Despite follow-up letters, on-air contacts and phone calls I have received no award or acknowledgment. Also last year I applied to the organisers of the West Australia 150th Year Celebration Contest. More letters and on-air contacts have produced no results.

Could someone from these organisations please contact me?

Yours faithfully,
Fred Reid VK7NFR. ■

40 Virginia Road, Tankerton, Whitstable, Kent
27th November, 1980

The Editor,
Dear Sir,
Simon Langton Grammar School in Canterbury, England, are celebrating the centenary of the founding of the School in 1881. To this end we shall be operating a special events station, active on all HF bands under the call GB4SLS, to run from 22nd to 28th February, 1981. During this time we are anxious to contact as many past pupils of the school as possible, especially those who are licensed amateurs and residing in Australia.

I would be most grateful, therefore, if a small message could be put to this effect in your magazine, stating also that anyone interested in making a sked with us should contact either myself, G4BBW, address as above, or G3LCK, c/o G3OSL, Simon Langton Grammar School for Boys, Nackington Road, Canterbury, Kent, England.

Andrew P Smith G4BBW. ■

27 Chauvel Street, Melton South, Vic 3338
11/11/1980

The Editor,
Dear Sir,
It is with great dismay and disbelief that I have just read November AR letters to the editor. I reached for the cover to see if I had accidentally picked up an early copy of CB Action.

What rubbish we read! A Novice, Victorian branch member, slamming the NSW WIA broadcasts(page 5 of the call book lists time plus frequency of broadcasts), it is silly!

Then we have three Novices hooing into VK3AMG, who apparently believes that if you are not as clever as he, you should not have a call.

What a waste of time and effort, could the members of WIA put their letter writing to a more constructive end, instead of the drivel put out now. We should be lobbying our MPs to get rid of channel 0 and 5A. Write letters to the WIA and try to shift them into pressing for a better deal for hams, third party phone patches, etc.

Try to be constructive. On a recent ABC programme (radio) which was discussing channel 0, calls were taken from interested parties, and I rang in. The comment was made when I referred to the ham band, and I quote, "Hams are an insignificant minority compared to the needs of the ethnics".

So how about it, let's all pull in the same direction to make the hobby better. United we may get a look in, divided our allocations will get less and less as big business finds more uses for them.

Yours,
Dave Toms VK3NSM. ■

PO Box 71,
Kooringal, via Wagga, NSW 2650
2/12/80

The Editor,
Dear Sir,

SOUTH-WEST AMATEUR RADIO SOCIETY

This Society, centred generally on the Riverina/Murrumbidgee Irrigation Areas in southern NSW does hold quarterly meetings, and invites all licensed amateurs in the southern NSW and northern Victorian areas to attend.

Regular weekly net takes place around 3610 kHz Wednesdays at 2030 hrs. daylight saving time (2000 hrs EST). Society call sign VK2DEI.

For further information concerning the activities of SWARS, interested parties are invited to contact the Hon. Secretary VK2SW, C/o PO Box 71, Kooringal, NSW 2650.

Many thanks.

Yours faithfully,
South-West Amateur Radio Society
Sid Ward VK2SW Hon Secretary. ■

The accompanying letter is reproduced with permission.

5/17 Coolangatta Road Camberwell, Vic 3124
4/10/80

Mr Alan R. Noble VK3BBM,
The President,
WIA (Vic Division),
Dear Alan,
Somewhat belatedly (for which I offer apologies) I desire to acknowledge receipt of your very kind remarks relating to my 20 years of voluntary service to the Vic Division as Inwards QSL Manager. To Council, I say "thank you very much for sending me such a kindly worded letter — indeed I am most sincerely grateful for all.

In particular, I would like Council members to be made aware that it has been my long established policy to have been loyal to the WIA (50 years), to have been conscientious in all voluntary jobs I've undertaken, and even if I say so myself, to have been a hard worker in carrying out the jobs concerned!

In conclusion, let me say how proud I am to be the holder of the badge of Honorary Life Membership, and the Meritorious Service Award (Vic) — the Wireless Institute of Australia has been most kind to me — it really has!

73. Yours sincerely,
Eric W Trebilcock (BEM) L30042. ■

TECHNICAL CORRESPONDENCE

PO Box 57, Bexley North, NSW 2207
14/11/1980

The Editor,
Dear Sir,

I was interested to read in the November issue of Don VK3BKU's QSO with W6NEY/CCW.

From the small amount of information given this would seem to be COHERENT CARRIER WAVE, a technique new to the Amateur Service, and pretty rare elsewhere.

Many of us probably know that a laser produces light that is monochromatic (of a single frequency), coherent (each photon is perfectly in phase with each other), of a single polarisation and emitted at a very low beamwidth and that these characteristics make it such a powerful source of radiation for communication, etc. Imagine how useful it would be to produce Radio Frequency radiation with those characteristics!

CCW attempts to do just that. Due to the differences between a radiator for light and one for RF there is no substantial improvement in output power, but there are potentially great gains at the receiver end.

In theory a receiver fitted to receive CCW from a transmitter of known characteristics would be able to

(i) reject almost all QRN, except that, that was perfectly in phase with the received signal. In practice receiver noise would be the limiting factor.

(ii) reject almost all QRM, except for stronger signals exactly in phase with the received signal. In practice phase jitter and sidebands would let strong signals of ± 45° be received, weakly.

(iii) fit ten times more pulse-modulated channels in the spectrum space.

Imagine no QRN or QRM! It seems too good to be true, and it probably is. But synchronous detection techniques (such as for DSBSC) promise a great improvement in reception in the future. The trouble is that these techniques mean that a lot of data has to be handled quickly, but the advent of microprocessors solves that problem. In fact we will see a lot more of them in the future for multi-carrier transmission, diversity and error-correcting codes.

If the prospect of keeping abreast of the "state-of-the-art" in the future seems a bit daunting, we can at least take heart from the fact that the much-put-upon "appliance operators", with a good ear and experience, can still pull a signal out of the murk better than theory predicts. Radio is as much an art as a science and can be handled on a large number of levels, which is why I find it so fascinating.

I believe that some past issues of "Ham Radio" mentioned the use of CCW for E-M-E work, and I shall be interested to read November QST.

73. John A. Faulkner VK2PCS/YWA ■

40 St Peters Terrace, Willunga, SA 5172
10th September, 1980

The Editor,
Dear Sir,

If we are trying to overcome the "black box" syndrome by inducing people to build their own equipment then we will maximise our chances of success by presenting simple, cheap projects.

Good applied engineering is concerned primarily with securing a stipulated design objective in the simplest and cheapest manner.

Your 5 watt CW transmitter (September 1980) fails dismally in this regard, and is a stunning example of solid state technology gone berserk.

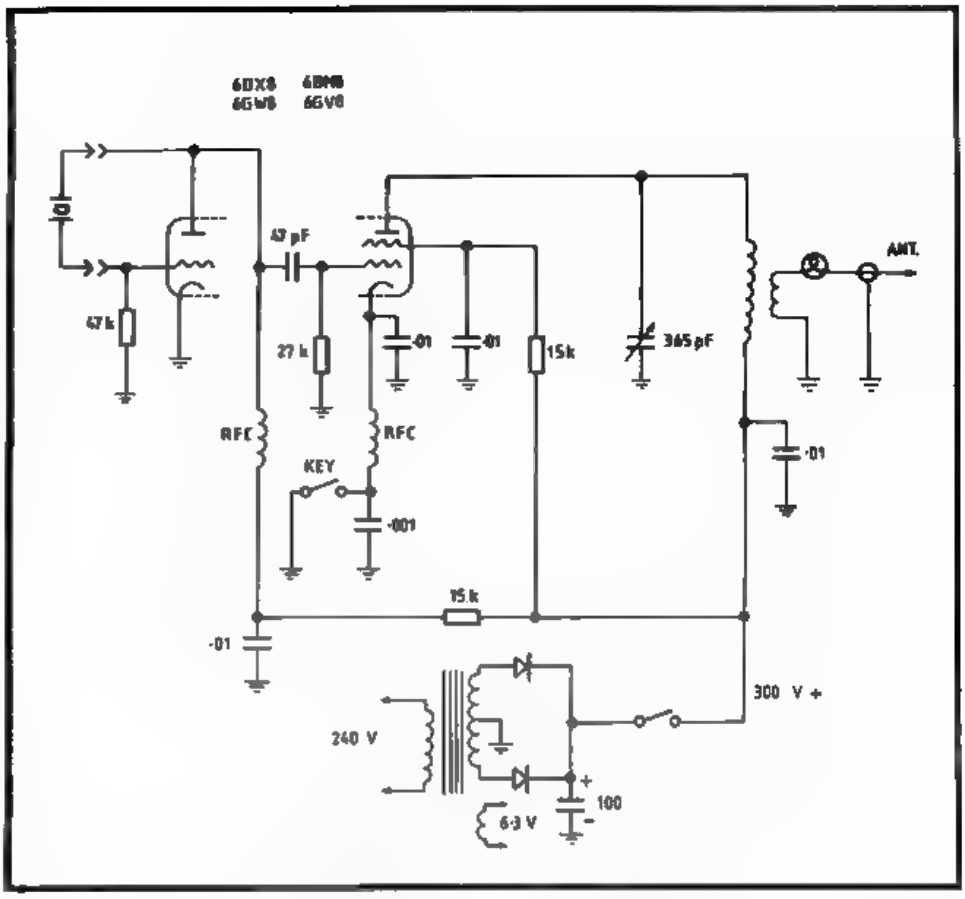
I present an alternative circuit which will do substantially the same job (below). Your circuit has about 100 components, mine has less than 20. Most of your components would be purchased new, most of mine can be salvaged from an old B & W TV set (save the crystal and plate capacitor). I could build mine from scratch and have it working in one hour if I set my mind to it, or I would take two or three hours if I wanted a pretty appearance. Yours could hardly be built in less than four or five nights. You price yours at $50 (including crystal), I price mine at nil cost (excluding crystal and assuming a modest junk box).

Your rig has a VXO, and the capability for battery operation which mine does not, but mine will readily work into any standing wave ratio.

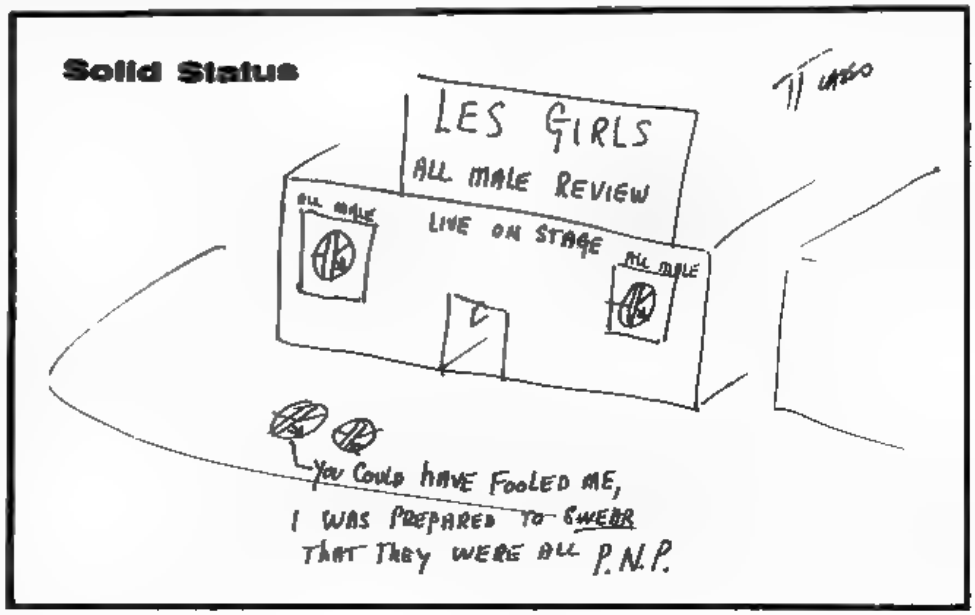
Solid state technology affords commercial manufacturers cheap, large-scale production and it is ideally suited to logic and non-linear applications. But for transmitters, transverters, receivers and converters of practical simplicity valves remain incomparably superior for one-off home built projects.

No criticism is intended of Mr Diamond. He has completed a worthwhile project and I am gratified that he has taken the time and trouble to publish it in our magazine.

Yours faithfully,
Al Rechner VK5EK ■



5 Watt CW Transmitter using Plasma Technology.



AROUND THE TRADE

NEW UPDATED WIDE BAND SCANNING RECEIVER RELEASED

GFS Electronic Imports of Mitcham, Victoria, Australian distributors for JIL, recently announced the release in January of an updated version of the JIL SX-200 HF/VHF/UHF programmable scanning receiver.

The new SX-200 still maintains the features of its predecessor, including wide band coverage (26-28, 108-180 and 380-514 MHz), encompassing the 27 MHz and UHF CB Bands, the 10 metre, 6 metre, 2 metre and 70 centimetre Amateur Band, the Australian Low and High VHF commercial two-way bands, VHF satellite and the UHF commercial two-way band, as well as the aircraft band. Front panel mounted fine tuning control to ensure that all Australian allocated VHF/UHF two-way radio frequencies are covered. AM and FM detection on all bands. Three mode squelch control that can be used to stop the set locking on spurious or carrier only signals. Digital clock and squelch output for use in triggering a tape recorder or some other auxiliary equipment. Memory back-up that lasts up to two years and capability of operating directly from 12 volts DC or 240 volts AC.

To improve the receiver, JIL have redesigned its RF, IF and audio board to make specification improvements in areas such as sensitivity, image rejection ratio and adjacent channel rejection. They believe this will put the new SX-200 even further ahead of some of the other receivers on the market. The expected selling price is $499, including sales tax. ■

HITACHI RELEASE NEW 1000V OSCILLOSCOPE PROBES

Hitachi Denshi Ltd. have released a new Probe as an accessory for their range of oscilloscopes.

The new Probe, AT 100 AG 1.5, is a 100 to 1 and 10 to 1 switchable type usable up to 35 MHz.

The input impedance of the Probe is 100M ohm on 100 to 1 and 10M ohm on 10 to 1 setting. The Probe is rated at 1000V DC plus AC peak is fitted with a 1.5m cable and a BNC connector.

The new Hitachi Probe, usable with most brands of oscilloscopes, will be particularly useful to Field Technicians, Laboratory Engineers and TV Servicemen. The AT 100 AG 1.5 is available from Hitachi oscilloscope stockist, Standard Components Pty. Ltd., Leichhardt for $67.00, plus tax. ■

VICOM APPOINTMENT

Vicom International Pty. Limited have announced the appointment of Mr. Phillip Fitzherbert VK3FF as Regional Sales Manager, NSW, ACT and Northern Territory the position being effective from 1st February 1981.

Mr. Fitzherbert will be based at the Sydney office, 339 Pacific Highway, Crows Nest. Vicom sees the creation of this senior sales enginering position as indicative of the importance it attaches to the NSW market. ■

MAGAZINE REVIEW

Roy Hartkopf VK3AOH

(G) General. (C) Constructional. (P) Practical without detailed constructional information. (T) Theoretical. (N) Of particular interest to the Novice.

HAM RADIO September 1980
Gunn Oscillator Design (TP). L Matching Networks (T). Pi Network Design (T). Half Wave Baluns (T).

CQ TV June 1980
Vision Mixer (various circuits).

BREAK IN August 1980
Special RTTY Issue.

QST September 1980
Collapsible Two Metre Quad (C). Synthesised Two Metre Transmiter (P).

RADIO COMMUNICATION October 1980
Antartica — Prefix Areas and Zones (G). G4BWE speech processor (P). Capacitor color coding systems (G).

RADIO COMMUNICATION November 1980
Pi Tuned Antenna Coupler (PT). Proportional Temperature Controlled Oven (PT).

HAM RADIO October 1980
Long Four Wire Transmission Lines (TC). Installing Radials (P). Voice Band Equaliser (C).

RADIO COMMUNICATION December 1980
Gasfet Preamp for 432 (C). G3OQD Light Pen (C). HF Oscilloscope Probe (C). The Secret Listeners (G).

QST October 1980
Long Delay Echoes (G). SWR Bridge for Twin Lead (C).

QST November 1980
SSTV in Colour (G). Spread Spectrum (G). Ladder Crystal Filter Design (TP). Ionospheric Hole Experiment (G).

CQ October 1980
Multi Band Long Periodic Antenna (PC).

BREAK IN November 1980
Home Brew Transceiver (CN). Discone Antenna (C). CMOS Oscillators (G).

ZERO BEAT October 1980
New SWL Magazine from Finland (G). Rules for Writers (G). ■

QSP

SYDNEY-RIO YACHT RACE 1982

A letter from the Race Director of the Cruising Yacht Club of Australia enquires if there would be amateur radio interest in monitoring reports from the fleet both for safety and daily position purposes and relaying these to operations control during the race. Additionally there might be the possibility of one or two amateurs being required on some of the larger vessels. The race is scheduled to start on 25th January, 1982, from Sydney Harbour and to end in Rio de Janeiro after sailing through dangerous waters, particularly around Cape Horn. All who might be interested please write to the Executive Office, Box 150, Toorak, Victoria 3142, as soon as possible. ■

[illegible] WELSHMEN

Or should we say Cymru? A circular from the organisers advises that Special Event Station GB2SDD (St. David's Day) will be active on 20m and other HF bands SSB all day 1st March to provide a focus for Welsh exiles abroad and anyone else likely to want a special QSL card. Work this station and 5 GW stations in March to qualify special award certificate. ■

ANTENNAS AND POWER LINES

An SEC of Victoria news release of 24th December reporting on the death of two CB operators on Mt. Tassie whilst engaged in erecting a CB aerial, urged such operators to look up and observe the position of power lines before erecting an antenna. Also, if an antenna is mounted on a vehicle take care when the combined height of vehicle and antenna is more than four metres. This is equally useful as a warning to amateur operators. ■

The Intruder Watch

Alf Chandler VK3LC,
Region 3 Intruder Watch Co-ordinator

The following Resolution was passed at WARC 79 and reads:—

RESOLUTION CR

Relating to the use of the frequency band 7000-7100 kHz. The World Administrative Radio Conference Geneva, 1979

considering —

(a) that the sharing of frequency bands by amateur and broadcasting services is undesirable and should be avoided

(b) that it is desirable to have world-wide exclusive allocations for these services in Band 7

(c) that the band 7000-7100 kHz is allocated on a world-wide basis exclusively to the amateur service

resolves —

That the broadcasting service shall be prohibited from the band 7000-7100 kHz and that the broadcasting stations operating on frequencies in this band shall cease such operation.

1. This Resolution replaces Resolution No. 10 of the Administrative Radio Conference 1959.

— unquote —

It is a moot point whether the People's Republic of China will honour this Resolution and take their Radio Peking, etc., off this band. What do you think?

I believe that Radio Peking is very sensitive to complaints sent direct to the station management so wouldn't it be an excellent idea if amateurs in Australia (and the world for that matter) wrote personal letters to Radio Peking complaining of the interference caused by their broadcast stations in our exclusive Amateur Band? The above Resolution could be quoted and emphasized. What about it Boys? ■

SILENT KEYS

It is with deep regret that we record the passing of —

Mr. G. BRUGMAN	L60852
Mr. D CHAMBERS	VK5NCG
Mr. R. HOARE	VK9RH
Mr. S. J WILCOX	VK3KC
Mr D TAYLOR	L40878
Mr. J. RUSSELL	L40525
Mr. R. RUSSELL	VK3VER
Mr. E R DOLMAN	VK3AIN/G2DCG
Mr. J. A BOELL	VK3AIF
Mr D. D PAINE	VK3FH
Mr. E J. CRUISE	VK7EJ
Mr. K E. FROST	L40709
Mr. D. C. HARDISTY	VK6DH

OBITUARIES

RAY HOARE **VK9RH**

Ray passed away on Thursday, 11th December, at his home on Norfolk Island, at the age of 66 years.

Ray was a well known amateur, and had resided on the Island for many years. Prior to his retirement, he worked on the staff of D.C.A.

Regrettably, he suffered indifferent health during the last five years of his life.

His passing will be mourned by many of the amateur fraternity.

Bill Hayes VK2AJL ■

GUS BRUGMAN **L60852**

Many VK6 amateurs were recently saddened to learn of the death of SWL L60852 Gus Brugman. Gus made many friends on the Perth amateur scene, especially among the Novices. Gus was also a keen flyer until poor health robbed him of that interest. He leaves a widow and grown son.

Paul Weare VK6NPW ■

JOE BOELL **VK3AIF**

The many friends of Joe Boell VK3AIF were saddened to hear of his passing on 6th December.

I first met Joe when he joined the WIA (VK3 Div.) AOCP class in 1965 when I was the theory instructor. Joe had reached retiring age and was determined to pass the exam. His enthusiasm to do this was evident by the number of times he drove from his holiday home on Philip Island to attend the Monday night class. Joe passed after starting with a very limited knowledge of the subject and in doing so set a shining example to others who might consider the course beyond them. Joe was a gentleman, ever grateful for the assistance he received in obtaining his licence, never claiming credit for the outstanding effort he made himself.

The call sign VK3 AUSTRALIA IS FRIENDLY (phonetics used by Joe) will be sadly missed by many 20 metre amateurs.

On behalf of all amateurs who knew Joe, may I express deepest sympathy to his wife, Greta, and family. ■

ERNEST DOLMAN **G2DCG/VK3AIN**

With the deepest regret we announce the death of Ernest Dolman G2DCG/VK3AIN.

Resident in the U.K., he and his wife Joan had visited Australia every second year since 1970, staying with relatives in Mentone. During his stays here he was a regular visitor to the Moorabbin and District Radio Club, and was also a keen participant in their field days whenever possible, operating under his Australian call of VK3AIN. He was a keen golfer and an active member of Margate (U.K.) Rotary.

He was proud of the fact that he had worked more than 300 VKs, and right up to the day of his death he maintained regular weekly skeds with several. A number of VKs and their wives visiting the U.K. were his house guests, sometimes for several days, and he really enjoyed taking them for a tour of the county of Kent.

He had almost completed renovating and extending his Margate home, and was planning on retiring about the middle of 1981, and on visiting this time both Australia and New Zealand for an extended period. It was not to be.

He was a popular member of the Radio Amateur Old Timers' Club, and had been able to attend two or three of their annual dinners. On his several visits to this country he made many worthwhile amateur friendships. He had a most engaging personality, with a genuine interest in Australia and Australians. We are the richer for having known him.

He leaves a wife Joan, a daughter Carol, and two small grand-daughters, to whom we express our deepest sympathy.

Vale! Ernest Dolman.

Ron Whitaker VK3JS, Ron Jardine VK3PR, Harry Cliff VK3HC ■

Mr. E. J. CRUISE **VK7EJ**

On October 7th at Dodges Ferry Ted Cruise VK7EJ passed away.

Ted had made a commendable contribution to Amateur Radio and the WIA in Tasmania over a period of years.

He initially came to Tasmania with the Permanent Army with the rank of Captain acting as Recruiting Officer. Subsequently he joined Homecrafts and EIL as Service Manager and was later involved in medical electronic sales.

His initial WIA activity was in Devonport, where he occupied a number of positions in the North-West Branch, including President. During his term he was instrumental in equipping the local Fire Brigade with radio equipment and was involved in a publicity operation from Mount Olympus in conjunction with the 1952 Olympic [redacted].

After moving to Hobart Ted continued his interest in helping newcomers, particularly with CW instruction and organisation of Youth Radio Scheme classes. He also became even more involved in WIA affairs, occupying the position of VK7 Federal councillor from 1959 to 1973 inclusive, and also a term as Divisional President.

Ted was the initiator of the WIA's "Hamfest" at Campbell Town and these became a regular event during this period.

After retiring Ted lived at Bicheno, then Dodges Ferry, near Hobart, and continued his on-air activity (particularly CW), golf and assistance with community activities.

The Tasmanian Division wishes to record their appreciation of Ted's efforts and extend their condolences to his family.

Reg Emmett VK7KK,
Tas. Div. President ■

QSP

10m REPEATER

According to November 1980 QST a W. German 10m FM repeater is operational from Mainz, near Frankfurt, call sign DB0QK, 06.00h to 20.00h (local) daily. Input frequency 29.57 MHz with 1750 Hz tone burst, output on 29.67 MHz. ■

DIVERSITY

Reading "Happenings" in QST for November 1980 provides an interesting insight into Amateur Radio in the USA. Here is a selection of items. The FCC dismissed two petitions requesting amateur examinations in Spanish and dismissed another petition for assigning sub-bands for third-party phone-patch. Individual amateurs are recorded as petitioning the FCC to grant extensions of US amateur phone sub-bands down to 3.75, 7.05, 14.1, 21.2 and 28.4 MHz on the grounds that the segments between the frequencies they request and the existing lower frequencies for telephony are under-utilized, foreigners can now compete more readily in the equipment and antenna spheres and FCC discrimination against US amateurs vis-a-vis foreign governments. Another amateur petitioner for similar extensions on 20 and 40m argued that the telephony mode has more users per "space" available than the CW mode. Another petitioner wanted the station ident time extended from 10 to 15 minutes plus removal of announcing the station identity with which contact has been established. An amateur radio club petitioned the FCC that the proposed new 10 MHz band be licensed in two segments — 10.1 to 10.12 MHz CW only and 10.12 to 10.15 MHz for CW and SSB subject to a licence class variation for the latter. ■

HAMADS

- **Eight lines free to all WIA members. $9 per 3 cm for non-members.**
- **Copy in typescript please or in block letters to P.O. Box 150, Toorak, Vic. 3142.**
- **Repeats may be charged at full rates.**
- **Closing date: 1st day of the month preceding publication. Cancellations received after about 12th of the month cannot be processed.**
- **QTHR means address is correct as set out in the WIA 1979 Call Book.**

FOR SALE

Yaesu FT221R 2m all-mode Tcvr, $575, AR22L rotator, $80. ATV convertor for 426 MHz, ZIM type, $25. Hanimex AC/DC Rx for ATV use, $75. 50W dummy load and Midland SWR/Power meter, $30. 20 amp. DC ammeter in case, $12. DX-150B comms. Rx., $100. Coax 20m low-loss "Superflex" helical outer cable with type-N connect., $90. 15m of RG-8 with UHF connect., $30. Antennae with balun/harness, 2m—4-el., $10; 2m—8-el., $35; 70 cm—13-el., $25; 50 cm—13-el. with 10m of coax., $35; FM—4-el., $20. Complete set ARA, $15, AR '76-'80, almost all issues, $25. Box of bits incl. coax connectors, 25m RG-58, valves, etc., $35. Xtals for ch. 40, 50 and Rpt. 2 for MR3, $20. Vendor going overseas, near offers considered. John VK3ZVZ. Ph. (03) 509 3793 AH or 509 7105.

FRG7 Rx in A1 cond. with manual, $250. Werner Ph. (085) 32 3104.

Yaesu FT101Z, as new, $670 ONO. John VK3VUW, Ph. (03) 309 3737.

Kenwood TS-520 with SP-520 speaker, 80-10m, AC/DC, perfect cond., $550 ONO, can deliver in area Orange, Sydney, Newcastle. Philip Nicholson VK2BNI, Ph. (063) 52 1651 AH, Feb. only PO Box 740, Bathurst 2795.

Converted Cybernet CB, 28 to 28.790 MHz cont., suitable Oscar xtal change, maximum 50W PEP, AM/SSB with CW fitted, $150. 13.6V, 12A power supply, $45. Rotator for yagi, $40. 40 ft. winch-up tower VK4NZB/ZKY, Ph. (074) 62 1177, 60A Pratten St., Dalby. Consider offers.

FT-7, exc. cond., mounting bracket, extra 10m xtal, manual and original packing, $400. SE-502 10m Txcvr also exc. cond., with manual and packing, $100. Ross VK4ZBS, QTHR. Ph. (075) 65 1445 weekends only.

FT101E with book, cables, mic., in good cond., front end AGC, modified per ARA No. 5, will deliver metropolitan Sydney, $600 ONO, credit can be arranged. VK2BQN, QTHR. Ph. (02) 451 7540.

Icom IC551 M/Mode 6m Txcvr, digital dual VFOs etc., with optional FM module, AC 240, DC 13.6V, showroom cond., bargain priced. VK2AAM. Ph. (049) 43 8910 AH.

Multi 7 2m FM Txcvr, fitted with reptr. 1 to 8 reverse 2, 4, 6, 8 plus 40, 50, 51, $165. Telmax heterodyne freq. meter, type T75, 85-1000 MHz with AC power supply, looks and operates like a BC221, $65. FTDX100 HF Txcvr, 80-10m, all transistor with valve driver and finals, 120W, AC/DC power supply, $300 ONO. VK3CCM, QTHR. Ph. (051) 44 3465.

Galaxy V, Mk. 2 Txcvr., 10-80m, 300W PEP, in good order, complete with handbook, value for money for new (or not so new) amateur at $310 ONO. P. Carter VK3AUO, QTHR. Ph. (03) 707 2096.

Heathkit SB200, $450. Moseley TA33 Jnr., $95. 14 MC valve SSB transceiver, $70 (home-brew). Transformers 1900V, 500 mA; 900V, 500 mA, 240/110 at 4.5 amps, 50 lb. 1" — 72 ohm dual coax., Command Tx and Rx, no despatch, buyer to collect. VK2TG, QTHR. Ph. (02) 533 2695.

SSB Txcvr, Philips, SC/08 8 chan. 100W out, ops. in 2 to 12 MHz band, two 6HF5 in FIN, CIR and align notes, $125; Partridge C core TFR 240/36V CT 12.5A and iron cored choke .02H, new computer spares, $40. Wanted: Valves 6BJ6, 6BN8, 6EW6, 6GK6, 6JB6, 6JH8, 12BE6, 12BZ6. VK4EF QTHR. Ph. (07) 38 1603.

Uniden 2020 Txcvr., perfect cond., used mostly for listening, 240 AC/12V DC, 80-10m coverage, mic., h'book, mobile power lead, $535; Hy-Gain 18 AVT, 80-10m trapped vert. antenna, $85. VK2NCJ, Glenbrook. Ph. (047) 39 1144.

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PHONE (079) 46 9131

DAVID McINERNEY

Yaesu FRG-7 Rx, as new, fine tune, $250. F. E. Leaver VK2SU, 50 Henry Street, Yenda 2681.

Yaesu FT101E, c/w cooling fan, mic., AC-DC, instruction manual, also spare fins and driver (new), $650, ATU home-brew, c/w built-in 5 position antenna switch same height and depth as FT101E, $50, 18AVT/WB-A, 5 band vertical, 10-80m, c/w manual, exc. cond., $75, Tech TE-20D signal generator new, c/w leads, $50. GDO EICO model 710, exc. cond., $50, National Panasonic solid state stereo tape recorder, four track, c/w five 7 in. (1800 ft.) tapes and operating manual, $200. VK2VDC, QTHR. Ph. (063) 42 2873 AH.

FT200 Txcvr., mike, power supply $300. Swan MB40A solid state 40 Mx Txcvr, mike, $150. DC-DC converter, 120W, 600V + 300V + neg. bias volts $50. VK2AS. QTHR. Ph. (067) 88 1033. AH (067) 65 7447.

Drake Txcvr TR4C in ex. cond., noise blanker fitted, 240V AC and 12V DC power supplies, three spare 6JB6A and one 12BY7A tubes, speaker, mike and instruction manual, a bargain at $475 the lot. Drake Rx RC4, mint cond., with noise blanker fitted and instruction manual, all normal xtals 3.5 to 29 MHz plus 13 extra covering 1.5 to 26 MHz, suitable stand-by Rx or for SWL, $450. VK3LC, QTHR. Ph. (03) 99 5344.

Swan Cygnet 300B HF AC-DC portable/mobile Txcvr, 300W PEP with mic., manual etc., good cond. and orig. carton, no mods. must sell, $360 or best offer. K. Blume VK2BJK, QTHR. Ph. (02) 449 1598.

FT7, new cond., modified with two 10 Mx band sections, 28.0-28.5/28.5-29.0 MHz, $360. HF linear amp., broadband 3-30 MHz, 150W CW O/P with 30W drive, compact. Ideal for mobile use with FT7 etc., $160. Galaxy 5 Txcvr good cond., reliable unit, c/w power supply, $200. HF phasing rig consists of modified Heathkit DX100U Tx and Heathkit SB10 phasing adaptor, pick-up only, $80. 2 Mx FM Txcvr TCA1674, 20W, fitted with 3 channels 40, 50, ch. 8, $40. Guitar amplifier "Goldentone" 20W, 2 channels with variable reverberation and vibrato, ideal small group, $80. S. G. Leatheam VK2BGL, QTHR. Ph. (047) 54 1096.

FT7 Txcvr, proven performer with VK Powermate PSU, $400. Duo-band Chirnside 4-el. yagi for 15/10m, brand new with BN86 balun, $145. VK2DET QTHR. Ph. (042) 84 3400.

TS120S, PS30, mint, VFO120, SP20, MC35S, MB100, never used, in orig. packing, workshop manual, the lot $800 ONO, would prefer buyer collects, but will pack for transport. John VK3VNQ, QTHR. Ph. (055) 23 1025.

Icom IC22S, 2m FM Txcvr, exc. order complete with mobile bracket, two sets power leads, inst. manual, spare diodes. $200 ONO. VK3DEC Ph. (03) 544 9328 AH.

MRSA 2m FM, ch. 2, 4, 6, 8, 40, 50 fitted, 1 position spare, mic., converted to 240V AC, handy base rig for stations south of the Great Divide, what offers? All letters answered. Len VK3LP, QTHR.

Yaesu FLZ100Z linear amplifier, mint cond., matches FT101Z and FT901 series Txcvrs, $500. Bill VK3SB, QTHR. Ph. (03) 550 3521.

IC22A, exc. cond. with mobile mounting bracket, $165. VK3CB. Ph. (03) 241 4154.

Hygain TH3 Mk. 3, 3 el. tri-band yagi, 6 months old, good cond. VK3VOS, QTHR. Ph. (03) 439 9632.

ALBANY

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32 SOUTH COAST HIGHWAY

(Off the Roundabout)

7 WASHERS and 4 DRYERS

Support a Local Amateur

VK6NQ

FOR SALE

Icom IC22S 2m Txcvr., brand new, in original carton, still under warranty. $280. Contact Mark VK3ACX. Phone (03) 836 7007.

Vertical Antenna, Hy Gain, 18 AVT/WB-A, good cond., instruction book, $60. VK2IC, QTHR.

TV506 6m Transverter, suits 520(S) and 820 series, etc., as new, in original carton, worked 10 countries on 6m, $175; DC-DC conv., suit 520(S), etc., brand new, in unopened carton, $59. VK2VSI, PO Box 16 Hawks Nest 2324. Ph. (049) 97 0164 AH, (049) 97 0383, 9 a.m.-1 p.m., Bus.

Shack Cleanout: All must go as I am returning overseas, all gear as new and in exc. cond. Heathkit SB102 Txcvr, w/mic., processor, CW and RTTY filter, AC-DC power supply, spare tubes, $495; Kenwood TS900 SSB/CW Txcvr., w/speaker, CW, RTTY filters, with mic., $525; Heath SB610 monitorscope, $125; Heath HM-102 power meter/SWR bridge,, $45; dummy load, 1 kW DC, $25; J and R SSTV monitor, camera, converter, tape deck and spares, $725; Ken 202 2m handie talkies, with all rpts. and spare batteries, $125 ea.; multi battery charger, $15; many accs. items, call for list. Jimmy VK2CK, QTHR. Ph. (02) 78 2545 AH.

FT101B, little used, spare valves, CW filter, $550; pair pony CB-36A 2 channel 28 MHz hand-held Txcvrs, in orig. cartons, $50 pair; Mosley A-203-C 20m 3 element beam, $50; commercial 20m helical mobile whip, $10. Malcolm VK6BA. Ph. (08) 380 7192.

Yaesu FT200/FP200 Txcvr plus PSU, some spare valves, good cond., in use at this station, $310. Richard VK2AIU, QTHR. Ph. (02) 36 2095.

Kenwood Trxvr TV502S, 2m SSB/CW, 12V DC, near new, 144-146 MHz, 10W output, suit 520, 520S, 820, 820S, $130, post free; "Amateur Radio" magazine, bound copies from 1946 to 1977 incl., complete set, offers please. VK6RO, QTHR 1980 Call Book.

Atlas 215X 5-band Txcvr, with NB ser. match, trans., mike, SWR meter, 2 cradles, 3 whips, handbook, coax and cables, ideal mobile, 200W PEP input, size 9½ in. x 9½ in. x 3½ in., exc. cond., $500 the lot. VK2BEB, QTHR. Ph. Batemans Bay (044) 72 4285.

Oakerblock, SWR-200B, 3-200 MHz, 52 or 75 ohm, $48; Asahi Mk. IIK SWR, dual meters, 1.8-150 MHz, 52 ohms, $25; Turner 254C desk mic., ceramic, 4 pin Kenwood type plug, $15. VK3UJ, QTHR. Ph. (03) 874 5632.

Yaesu FT101 in very good order, manual, mike and two new valves for final, $400. Keith Scott VK3SS, QTHR. Ph. (051) 47 2265.

FT7 Txcvr, very good cond., addit. xtal for 10m, proven performer, with VK powermate PSU, $400; Katsumi electronic keyer, EK 105A, $35. John VK2DET, QTHR. Ph. (042) 84 3400.

Sanyo RP8880 Rcvr., 0-30 MHz, SSB/AM, plus 88-108 MHz FM, 1 MHz and 10 kHz xtal marker, battery/240V, $240; SE502 10m txcvr, $90. Ray VK3ULZ. Ph. (03) 81 2463 Bus., (03) 857 7463 AH.

TS520S with MC50 mic and DC-DC converter, $650; with DG5 digital readout, $800. John Caine VK2VZX. Ph. (0684412) Binnaway 24.

Magazines: Approx. 50 Radio and Hobbies, from 1945 to 1948, also other mags., construction guides, etc., up to 1963. All offers to Gary VK3VNX. Ph. (03) 859 1205.

Kenwood TR7600, AR240 2m 800 ch. hand-held SX200 scanning Rx, microwave module 1296 MHz transverter, microwave module 432 MHz transverter, Icom IC502, Lunar 6m 25W linear amp., Icom IC202, Icom IC20L 10W 2m amp., 10m Swiss quad, 15 element 2m beam, 14 AVQ 40-10m trapped vertical, ZBJ 432 MHz beam, ATN 580 MHz ATV beam, Hitachi stereo tape recorder, LW, MW, SW, FM, c/w speakers, Discone Rx aerial 80-500 MHz, 2m Ringo and army 6m class C amp and ammeter, SWR meter, sniffer and sniffer beam, plus odds and ends, $80, ONO; AR22L rotator, VLF convertor, 10 kHz-500 kHz, IF out 3.5 MHz, 2 transistor radios, fast to slow scan PCB with IC sockets, cost $100, offers; IC701 HF rig, damaged KP202, EM300 multimeter, antenna dummy load, TV pattern generator, liner AM SSB 12W CB converted for 10m; other items, please enquire. Must sell, QSYing to VK4 early 1981. Lionel VK3NM, QTHR. Ph. (03) 88 3710 home, (03) 568 2733 work.

FOR SALE

Palomar HF Linear Amplifier, 200W PEP, new, $190; Ken KR400 rotator, little use, $100; SL56 active audio filter, 12 pole, 60 dB notch, $65; 18 AVT HF trap vertical, $85; Yaesu 8 pole, 9 MHz, 2.4 kHz xtal, filter, new, $45; Hills 30 ft. telescopic mast, complete set guys and hardware, 2 extra sections, $50; HD de luxe 20m helical whips, new, $18 each. Bill Roper VK3ARZ. Ph. (03) 90 7409.

Multi-Palm II hand held 2m Txcvr, rptr. 2, 3, 5 and 8, simplex 40 and 50, as new. Also nicads, charger, leather case, $200 ONO. VK3BNJ. Ph. (03) 743 6708.

Ham Band only valve type Rx, covers 10-80m, professionally built, size 15" x 5½" x 11" deep, PSU on chassis, speaker supplied, operates satisfactorily, needs alignment, $85. Model 15 TTY machine, no keyboard, VGC, governed motor, $50. Creed 7B TTY machine, c/w keyboard, VGC, $50. VK3AQB, QTHR. Ph. (03) 337 4902.

Prop pitch motor, ideal heavy duty antenna rotator, good cond., CW 24V DC PSU. What offers? VK4PO, Brisbane. Ph. (07) 399 8660.

Yaesu FT200 and FP200, VGC, full 10m, $350. Pair 811As, $40 ONO. VK4WR, QTHR. Ph. (071) 41 1315.

Yaesu FT.0B, little used, complete with mic., CW filter, spare set of valves, manual, plugs and jacks etc., $550. VK5CY, QTHR. Ph. (086) 62 1016.

Rx C8500 Wadley Loop System, 0.5-30 MHz, AC240V DC12V, with manual, good cond., $180. Les L31197, QTHR. Ph. (03) 277 1874.

Transformer 10kVA 415/0-120-240V, paper tape punch NCR572, toroid memory banks NCR500. Type 15 RTTY machine. Offers to Noel VK2AHH, QTHR.

Yaesu FRG-7 Rx, 05-29.9 MHz, ex Dick Smith, 12 months old, little use (logged 201 countries), original packing, $225 ONO. P. D. Mutton, 85 Finlay Street, Bridgewater, Tasmania, 7401.

FRG7 Yaesu Rx, bought 1979, little use, $200. VK2BQQ, QTHR. Ph. (02) 328 7892.

Shack Gear: TS520S HF Txcvr, $600; transverters to suit, TV502M; TV506 6M — $190 each; accessories for TS520S, VFO520 remote VFO, $100; MC50 desk mic., $10; SP520 external speaker, $20. IC502 6M SSB portable, $190; NAG50XL 6M linear, 80W integral 12V PSU, can be used as base supply for IC502, $150; FDK Multi-Quartz 16 2M 23 chan., repeaters 1-8 fitted, $60; antennas (4) 2M 14-el., $40 each; oscilloscope TRIO CO-1303D 75mm 5 MHz, $100. Reasonable offers, deals for two or more items. Contact Steve VK2ZTO, bus. hrs. (02) 427 6619, after hrs. (045) 73 2136.

FRG7 Rx, .5 MHz to 30 MHz, late model, clean, exc. cond., $225. VK2KR. Ph. (02) 449 4524.

WANTED

"Antenna Handbook" (K. Glanzer), Vol. 2 only. VK2KR, QTHR. Ph. (02) 449 4524.

Small CW or AM/CW Tx or VFO, covering 10-80m or 10/15/20m, solid state or valve type. VK6KV, QTHR. Ph. (09) 450 5192.

FT7 or similar HF Trx., cond. not important, prefer part exchange FT227R memoriser UHF unit, top cond., cash difference. Bill VK2BDW, QTHR. Ph. (02) 674 1184.

For rack mounted Collins R391 Comm. Rx.— top and bottom cover plates (R390 are identical), crystal oscillator sub-chassis cover plate and RF sub-chassis cover plate, 3TF7 ballast, modules and valves. VK3BFB, QTHR. Ph. (03) 93 1638.

WANTED

RF Spectrum Analyzer, 3.5 MHz to 500 MHz, also circuit or information on agent for Airmev instruments, England, modulation meter 409-6917-1000. VK2ZQC, QTHR. Ph. (02) 81 2143 AH.

Swap "Ekco" colour TV for HF receiver, English models, works Brisbane area, push-button tuning, ideal experimenter. VK4NSG, Eidsvold 4627. Ph. 17.

Invalid Pensioner requires circuit boards for Philips TCA1675-77 Txcvr, base, mobile, or partly demolished, converter front ends, 2nd oscillator boards, 16.755 IF coils, 455 KC IF strips, mute, audio preamp, crystal switch boxes, etc. VK5ZNN, QTHR.

RM-3 Control Unit to suit Icom IC 701 Txcvr. Particulars to VK4OV, QTHR. Ph. (077) 44 2161 Bus., (077) 43 2808 AH.

Swan Txcvr, consider out of order equipment. VK2TG, QTHR. Ph. (02) 533 2895.

FRDX400 Rx, with manual, in working order. Warner. Ph. (085) 32 3104.

Rx R392/URR, R390 or R390A/URR, SP600 JX, any condition, also good quality commercially built short wave CW transmitter covering roughly 1 MHz to 25 MHz. VK5QQ, QTHR.

Hallicrafters HT55B or HT41 linear amplifier. John Wallace VK3VV, QTHR. Ph. (054) 43 2803.

Secondhand Hy-Gain TH6DX Beam, will swap FRG-7 g.c. VK3VSM. 19A Mason St., Regent 3073. Ph. 470 1255, ask for Max Martin.

Circuit diagram for 11m Trx Johnson Viking 326D, photo copy or original, also information on Slider for same. M. A. Martin VK3VSM. 19A Mason St., Regent 3073 (will reimburse).

Eddystone 770R or equal VHF Rx. Slade, 38 Barker Rd., Strathfield 2135. Ph. (02) 76 8070.

Help in getting old model 14 (FRXD) working. Machine reads tapes but does not punch correctly, need manuals, etc., or will pay for photocopying of same. Terry Robinson L31105, Lot 92 Russell Ave., Woodend, Vic. 3442. Ph. (054) 27 1574.

Yaesu FT101E, in good working order. VK2UJ, QTHR.

Source of Tuning Capacitors, all sizes and values, also reduction drives, non-melting plug-in coil formers, slug tuneable, bandpass filters for AM SSB CW, xtal ceramic, etc. G. L. Dun VK2DMA, PO Wattamondara, NSW 2794.

Rotator or Tilter, Kenwood AT-200 antenna tuner and Uniden CB (Ferris, President). Danny. Ph. (03) 568 4414.

Teleprinter Model 15 reperforator and tap distributor for museum demonstrations. Colin Gracie L30080, PO Cavendish.

IC RM2 Digital Scanner Adapter for IC211 2m Txcvr. VK4AKU, QTHR. Ph. (071) 46 1714. Also VK3BAV. Ph. 598 8685.

STOLEN EQUIPMENT

FTDX401 Txcvr, serial No. 316293; Swan 240 Txcvr., No. unknown. Hurtle Watson VK5HW.

Kenwood hand-held TR2400, serial 61826, homebrew linear in diecast box, 2m 5/8 antenna — from VK2YGS. Ph. (02) 99 4993.

Yaesu FT221, serial SK302168, VHF linear KLM elec. serial 277; SWR meter, Oakerblock 47695 — from VK2BBJ. Ph. Hornsby Police.

Kenwood TS800, serial 610380; Icom IC251A, serial 10910578; Yaesu FT707, serial 08040015; FT707 PSU, serial OH030451; Kenwood TL120, serial 800009; Kenwood R100 Rx, 1001024; UHF hand-held scanner, 50 ohm dummy load, several FLUKE multimeters; Kenwood GDO, BSR turntable P157; IC2A hand-held, 2 Emotator rotators 502 and 103, etc.— from Willis Trading in Perth.

On 7th December the Sydney showroom of VICOM in North Sydney was broken into and the following equipment was stolen: **Icom 2m all mode base unit IC251A,** No. 10901151; **Icom 6m all mode 80W base IC551D,** No. 10101408; **Icom HF transceiver IC701,** No. 8004944; **Icom desk mic. ICSM2,** No. 50020255; **Daiwa VHF/UHF SWR/power meter CN630.** Anyone with information on the stolen equipment should pass it on to either VICOM's Sydney or Melbourne office or to North Sydney Detectives.

DAIWA antenna tuners set new performance standards

For the first time there's an automatic tuner which reduces SWR to less than 1.5 to 1. The CNW 418 tuner circuitry covers 8 bands (3.5-28MHz). The SWR/Power meter covers 1.3-30MHz and is rated at 500w PEP. **$185**

Antennas

Discone
GDX 1
65MHz–520MHz $80
SCANX
65MHz–520MHz $39

Ringo
VAR/2
6dB gain.
Omni-directional with 3 half waves in phase and 1/8 wave stub. Gives extremely low angle of radiation for better signal coverage. $58

Jaybeam
MBM48/70 70 cm, 48 element.
14.9dB gain
$89

PBM18/70
70 cm, 18 element
14.9dB gain
$98

Vicom 2 metre whips

VAW/2/4F	¼ wave fibreglass	$5
VAW/2/4S	¼ wave stainless steel	$5
VAW/2/5	5/8 wave fibreglass	$12
VAW/2B	Base for whips	$4

Vicom 2 metre Beams

VAB/2/10	10 element 12dB gain	$79
VAB/2/5	10 element 8dB gain 500W	$37
VAB/2/X	Crossed Yagi 10 element 12dB gain	$99

Vicom HF whips

VAH/10	Mobile whip 10 m	$30
VAH/15	Mobile whip 15 m	$30
VAH/20	Mobile whip 20 m	$31
VAH/40	Mobile whip 40 m	$30
VAH/80	Mobile whip 80 m	$31

Get the world in one neat package with the ICOM 720

Fingertip control of all functions. Step through 0.1 to 30MHz in 1MHz steps. The IC 720 is a compact combination of all band transceiver and general coverage receiver, weighing just 7.5 kg. Dual VFO's, Pushbutton operation throughout.

Katsumi Morse Keyers

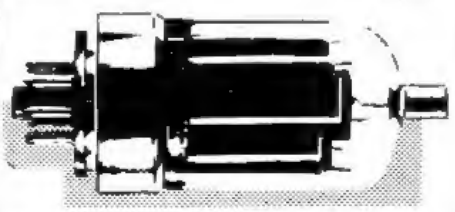
MK 1024 Programmable, electronic keyer $219
EK 121 Keyer with dot memory $69
EK 150 Electronic keyer $131

Bits and Pieces

BL50A 50ohm 4KW Balun $25
BL70A 70ohm 4KW Balun $25
PD30LS DAIWA low pass filter 32MHz $23
AD103X DAIWA masthead divider 70 m/2 m/HF $67
RD300 Kenwood 300W dummy load $82
VM1 Noise cancelling mic. $15

Check right here for the best valves in town–and the cheapest prices!

6KD6	Finals for Yaesu Linears	11.00
6JS6C	Finals for Yaesu Transceivers	11.00
12BY7A	Drivers	5.50
6146B	Finals	14.00



Check the range of Icom Transceivers

IC2A	2 m FM synthesized handheld	$312
IC22S	2 m FM synthesized transceiver 10W	$299
IC255A	2 m FM synthesized mobile 25W	$436
IC251A	2 m all mode transceiver 10W	$877
IC260A	2 m FM/SSB/CW synthesized mobile 10W	$665
IC280A	2 m FM synthesized remotable 10W	$450
IC502A	6 m SSB portable	$289
IC551	6 m All mode (not FM/VOX/PBT)	$599
IC720	HF all band solid state 100W	$1379
ICPS20	240V AC power supply	$239

VICOM

Vicom International Pty. Ltd.
68 Eastern Road,
South Melbourne, Vic. 3205
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Crows Nest, NSW 2065
Phone (02)4362766

Brisbane 352522, 3415377
Townsville 772633

Wollongong 291455
Cairns 541035

N.Z. 287946
Adelaide 437981

Wagga 212125
Melbourne 836 8635

URGENT URGENT URGENT

THIS CONCERNS YOU!

In this issue the QSP by Michael Owen VK3KI sets out the background to the recently issued Draft Table of Australian Frequency allocations.

In this QSP it is stressed that each individual amateur comment on the provisions of the table — both generally and specifically as they affect the Amateur Service.

This is one time when it is important that your individual voice be heard.

It is not enough to think that the Institute submission absolves you from action.

You are urged to sign the pro-forma and send it to the address indicated — or better still — copy it out in your own handwriting.

If you have other viewpoints you are urged to put them down on paper and send them to the address given in the pro-forma.

Time is short and responses must be in by February 16 or as shortly thereafter as possible.

P. WOLFENDEN VK3ZPA, Federal President
On behalf of the Executive

DO IT NOW!

ADDRESS:.....

.....

DATE:.....

The Chairman,
The Australian Tableof Frequency
Allocation Committee,
G.P.O. Box 5412CC,
MELBOURNE, 3001.

Dear Sir,

The public has been invited to comment through you on the draft Australian Table of Frequency Allocations.

I am aware of the position taken by the Wireless Institute of Australia in respect to the draft and I wish to express my support of that position.

I generally agree to the provisions of the draft as a whole but make the following points in respect to the Amateur Service, which I feel are important to all amateurs.

1. The new bands at 10, 18 and 24 MHz should be made available to amateurs in Australia at the earliest possible date — that is January 1, 1982.
2. WARC allocated the new band at 10 MHz to the Amateur Service on a secondary basis. I believe that Australia should remove any other existing services from this band because it is so narrow. I note that Australia's position at WARC was for an exclusively Amateur band at 10 MHz and I assume that, as no difficulty was then envisaged, there would be none now.
3. I strongly support the proposal to allocate 50-52 MHz to the Amateur service on a secondary basis but also firmly believe that Channel 0 should be relocated as soon as practicable.
4. I also support the allocation of a small segment around 3.8 MHz to facilitate international communication.

Yours sincerely,

SIGNED:.....